

THE SCIENCE AND ART DEPARTMENT

1853-1900

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VOLUME ONE

Part One - Administrative History

SUMMARY

The work is set out in four main parts. In the first section, the administrative history of the Department is chronologically detailed, by a division into five periods which represent the origins, the formative years, and the progress under three successive groups of chief officials. The basic policy, of local "self-support" encouraged by a system of payments on the results of examinations, is examined, and some reference is made to institutions in which this policy was carried through. The extension of the Department's fields of activity, later modifications to its system which threw more responsibility on newly created local authorities, and the end of the "results" system are recorded. These developments are set against the industrial and political backgrounds of the era. Relations with the primary Education Department are also considered.

In the second section, specific developments in Science and in Art teaching are separately recorded. There is also a division between the treatment of the developments in, and the machinery of, provincial and central institutions, the latter of which were controlled by the Department and used as "stimulating" influences. The section also deals with the organisation of the Department's Inspectorate, the training and the remuneration of the teachers who acted as its "provincial agents", and the encouragement, and the responses, of the students who took its examinations.

The third section is concerned with the political and social setting. The influence on, and responses to, Departmental policy, of politicians and manufacturers, are recorded. The views of representative organs of the contemporary press are examined. There is a consideration of the influence of religious factors on development. The section concludes with a study of the relationships of the Department with other bodies which worked in the same fields.

The fourth and final section includes an attempt to summarise the Department's development and its achievements, and its effects, including a brief account of its influences in the field of tertiary education. A biographical appendix, and tables of statistics to which references have been made in the body of the work, are included in this section.

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PARLIAMENTARY PAPERS

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Select Committee on Mr. Goffin's Certificate	<u>S.C.G.C.</u>
Select Committee on the Museums of the Science and Art Department (1897 and 1898)	<u>S.C.M.</u>
Select Committee on Schools of Art (1864)	<u>S.C.S.A.</u>
Select Committee on Scientific Instruction (1868) (The "Samuelson" Committee)	<u>S.C.S.I.</u>

CHAPTER ONE

ORIGINS

(1835 - 1853)

- a) The foundation of the Central School of Design
- b) The development of provincial Schools
- c) The arrival of Henry Cole
- d) The foundation of the Department of Practical Art
- e) A parallel need for Science Schools
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a) The foundation of the Central School of Design

By 1835, the declining sale of British textiles, ceramics and metal goods of superior quality on the Continent¹ bore so heavily on the public conscience that a Select Committee of the House of Commons was set up to "inquire into the best means of extending a knowledge of Arts and principles of design among the people".² Its Report recommended the setting up of a "Normal" School in the Metropolis. It also proposed that the government should assist in the establishment of provincial Schools of Design and public galleries of Art. Indeed, it regarded the "want of instruction in design and the absence of public and freely open galleries" as the chief causes of "the difference in the artistic feeling of the English manufacturing districts". This want, it implied, was the prime reason for the lesser attractiveness and, therefore, the lowered sales, of the British goods. The Committee believed that government action of the kind suggested would not be interference, but would be "development and extension" which would not be intended "to control action or to force cultivation". Nor, the Committee thought, should the work in the projected Schools be confined to theoretical instruction, as "the direct application of the Arts to manufactures" should be a feature of the curriculum.³

After due debate, such action was taken. An initial grant was made towards the setting up of a School in London "to improve the national manufactures".⁴ To help to ensure this, the School was placed under the Board of Trade, itself undergoing a change at that time into a Board of Industry.⁵ This was a precedent in that the Central School was to be under the direct control of a government department. Whereas the Select Committee had talked of "aid similar to that given to the elementary schools", referring to the grants-in-aid which had been given since 1833, these grants had been made to voluntary bodies: the Education Department of the Privy Council had no direct responsibility for schools. The Central School opened at Somerset House in June 1837, and evening classes began there six weeks later.⁶

1 There is little direct evidence on this matter. Witnesses before the Select Committee referred frequently to "trade rivals" and their own relatively greater expense and difficulty in obtaining saleable designs.
 2 P.P. (1835) v
 3 P.P. (1836)LX
 4 Hd. XXXV (1836) 1085
 5 R. Prouty The Transformation of the Board of Trade 1830-1855 (London Heinemann 1957)
 6 F.P. Brown South Kensington and its Art Training (London Longmans Green 1912) 2

3.

The new School met with no opposition from one vested interest of the day, the Royal Academy, which had its own Schools.¹ Perhaps this was because study of the figure and work from statuary was not envisaged, and because the students were to be drawn exclusively from the "artisan" class.² Though the School was founded as a "workshop" many of its entrants regarded it as an "academy", and aimed at becoming artists rather than craftsmen. When many of them felt, eight years later, that they were being directed into humbler occupations, they rebelled, and demanded more artistic training. This was eventually allowed.³ There was certainly in the early days an emphasis on elementary work, which involved a great deal of copying of examples. Much of this would have been avoided if there had been better preparatory schools in existence.

The lay Committee which had overall charge of the School were mainly Royal Academicians. Either they were completely dormant or they were inordinate meddlers. The teaching in the early years was very badly organised. The three stages of instruction suggested by Richard Redgrave in 1846⁴ were only established after the change of regime in 1852. These were "the inculcation of skill, the acquisition of taste and an acquaintance with the processes of manufacture".⁵

b) The development of provincial Schools

The real impetus to provincial Schools came in 1840, although they had been suggested by the Select Committee and were mentioned in the initial debate on the Metropolitan School. A sum of £10,000 was voted to aid in their establishment.⁶ They were to be under the control of the Central School. The Council of the Central School required a guaranteed local subscription, to equal its grant, which would pay the master's salary. It would also provide a free collection of casts and examples. The Schools were to be subject to inspection, and "the general system and mode of instruction were to be the same as those which prevailed in the Central School". In fact, as they developed, they limited their instruction to elementary work, and there were really no advanced courses in Design.⁷

1 Quentin Bell The Schools of Design (London Routledge and Kegan Paul 1963) 67

2 Brown op. cit. 5-7

3 Bell op. cit. 163. (Among the "mutineers" were Burchett and Herman, who were later to serve on the staff of the School as Head and as Registrar respectively).

4 Redgrave joined the staff of the School in 1847. (Biographical Appendix)

5 F.M. Redgrave Richard Redgrave C.B., R.A. A Memoir (London Cassell 1891) 62

6 Hd. LIII (1840) 1324

7 G.C.T. Bartley The Schools for the People (London Bell and Daldy 1871) 146

4.

Within three years such Schools were established in the industrial centres of Manchester, Birmingham and Sheffield, and even in York, as William Ewart, who had first proposed the Select Committee in 1835 noted with some surprise. In reply to this point, Peel, the Prime Minister and Chancellor of the Exchequer, said that since the citizens of York had responded to the appeal, presumably for local subscriptions, there was no necessity to restrict the Schools to manufacturing towns.¹ Thus, almost from their inception, the Schools were not to be linked with the manufactures of a district as a first principle of their existence.

Meanwhile, a class to train teachers for the provincial Schools had been formed at the Central School.² A series of reforms in the curriculum of that School, and changes in its staffing, went on through the 1840's.³ The method of training designers, and producing designs, had still not been resolved when Henry Cole⁴ interested himself in the subject.

c) The arrival of Henry Cole

Employed at this time as an Assistant Keeper in the Record Office, Cole was a leading member of the Society of Arts and had helped to organise its Exhibitions of Arts and Manufactures. This brought him to the notice of the Prince Consort. As a semi-professional artist and designer⁵ he had, as the Director of "Summerly's Art Manufactures" put employment in the way of many of the members of the staff of the Central School.⁶ (The "Art Manufactures", begun in 1847, were "designed to show that good taste and pure Art might be introduced into everyday articles").⁷ He was, therefore, an interested party in schemes for the improvement of the Schools. As early as 1842 he had recognised their importance as a branch of national education, but had doubted "whether any kind of government interference can do more for Art than change its direction without improving its character".⁸

In 1847, Cole used a chance meeting⁹ with Shaw Lefevre,¹⁰ an official of the Board of Trade, to obtain introductions to Labouchere,¹¹ the President,

1 Hd. LXVIII (1843) 884-885

2 Hd. LXV (1842) 143-149 and Chapter XI section (a)(i)

3 D.S.A. Calendar and History 1893 6

4 Biographical Appendix

5 He won a Society of Arts medal in 1846 with a tea-service which was to be on Minton's list for many years. [N. Pevsner High Victorian Design (London Architectural Press 1951) 13]

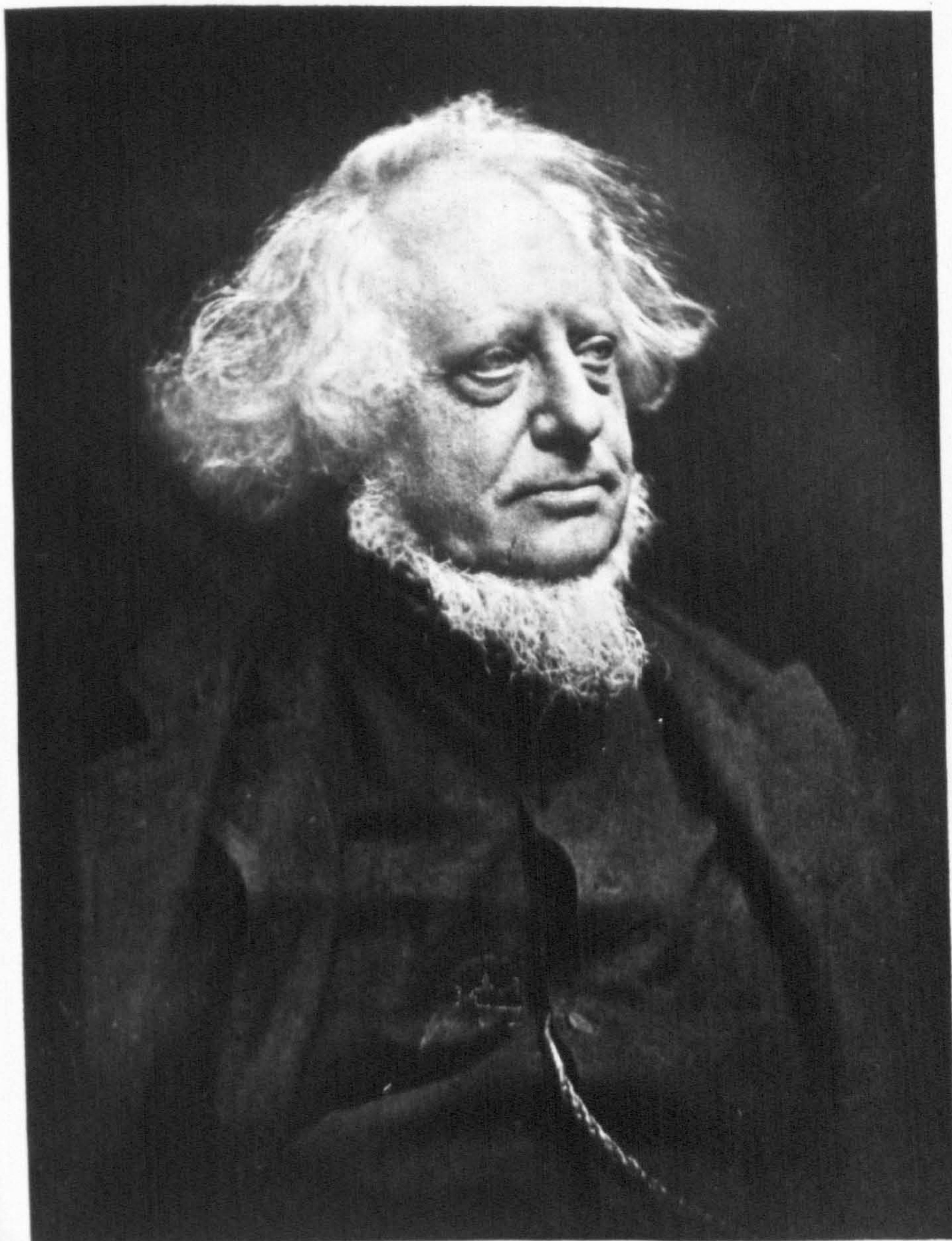
6 Cole wrote fairy stories and several articles under the pen-name of Felix Summerly.

7 F.M. Redgrave op. cit. 65

8 Westminster Review XXXVIII July-October 1842 171

9 Cole MS Diary 5 August 1847

10, 11 Biographical Appendix



SIR HENRY COLE, K.C.B., CHAIRMAN OF COUNCIL, 1850 AND 1852.

From a Photograph by Mrs. Cameron, taken about 1872.

Sir Henry Cole
(aet. 64)

(From the History of the Royal
Society of Arts by
H. T. Wood 358)

and Lord Granville,⁴The Vice-President. He refused their offer to lecture in the Central School.¹ In 1848, he was invited to give his views on the Schools² and was offered £100 for his services. He replied, however, that remuneration was not the main point.³ He believed at first that he had the support of the joint-Heads of the Central School, Redgrave, Herbert and Townsend, and of the administrative Head, Deverell. Stafford Northcote⁴, at that time a legal assistant at the Board, began as an ally.⁵ However, he veered to a point where he doubted the value of designs being produced in the Schools, and by December was "very distant".⁶ Others deserted Cole, too, Townsend "wavered".⁷ Deverell was "jealous" and was "suspected of treachery".⁸

Cole turned to a more powerful patron before he finally despaired of Northcote and the masters. In October 1848 he visited Windsor, where "Prince Albert approved of my plan for the School of Design".⁹ He formed a new partnership, with Milner Gibson, a Member of Parliament who was also interested in the reform of the Schools.¹⁰ In March 1849 he put out the first issue of his Journal of Design and Manufactures, in which he said "We attach the greatest importance to the Art instruction of workmen engaged in Art manufactures". He went on to say that "The Schools of Design must be reformed and made business-like realities".¹¹ (In fairness, it must be said that the Journal was not exclusively concerned with Cole's campaign for the reform of the Schools. It covered the whole field of design, and samples of fabrics and of wall-papers were actually gummed into each copy as illustrations). Richard Redgrave worked closely with Cole on this periodical. In a Preface to the first bound Volume, Cole referred to his campaign and claimed "Already manufacturers and designers may congratulate themselves that reform is at hand". At least one contemporary saw no grounds for congratulation. The Art Journal believed that "A person who has been labouring for three years to prove his incompetency as to all matters pertaining to design is to obtain a permanent place in the direction".¹²

1 ed. A.S.Cole Fifty Years of Public Life (London Bell 1884) I 109
 2 Cole op. cit. I 110 (Board of Trade Minute of 14 September 1848)
 3 MS letter Cole to Northcote 14 September 1848
 4 Biographical Appendix
 5 Cole MS Diary 30 August 1848
 6 Ibid. 4 December 1848 [He is described by Bell (op. cit. 221) as "Cole's arch-enemy", but their later relations were most amicable. By January 1850 he hoped that they "had buried the tomahawk" (MS letter Northcote to Cole 3 January 1850). He used Cole's good offices in establishing a School of Art at Exeter, and they continued to correspond for a long period.]
 7 Ibid. 24 September 1848
 8 Ibid. 11 December 1848
 9 Ibid. 20 October 1848
 10 Bell op. cit. 220
 11 J. of D. I March 1849
 12 Art. J. July 1849

A further enquiry into the Schools by a Select Committee of the House of Commons revealed little satisfaction with them.¹ Cole, in his evidence, charged that there was "want of proper responsibility in management", said that the manufacturers were daily growing more dissatisfied, and pointed to the "lack of any satisfactory results".² The report of the Select Committee said that only a very small proportion of the industrial designers in employment had gone through the Schools.³

References to the provincial Schools in the periodical literature of the time do not always bear out the accusations made against them by Cole and others. (It must be remembered that they are usually based on public pronouncements made at prize-givings and so on, and that they do not necessarily reflect the real state of things.) Thus, the Potteries School was said in September 1849 to be "making satisfactory progress" and the Sheffield School in the same month was "making progress and being of increased usefulness".⁴ The Manchester School, "the worst of the bad" in the 1849 Report, was reported in July 1850 to have trebled its pupils in a year, with a greater proportion of adults and an increasing number of artists and designers in its classes.⁵ These reports are, however, counterbalanced by the confusion Cole discovered in the administration of the Schools and in the distribution of the grants. Very few Schools had kept to the agreement to provide half the expenses. In 14 out of 17 Schools, local subscriptions did not equal the grant, and in nine of these even fees and subscriptions together did not equal it. Where government aid was lowest, the local subscription was highest, and the cost per student from the grant varied from £2-2-7 in Coventry to £10-11-2 in Leeds. In Belfast and Birmingham, each with a government grant of £600, local subscriptions did not exceed £320 a year. In Glasgow, on the other hand, local subscriptions were twice the amount of the grant. In Stourbridge the subscriptions were five times as great. There was a completely arbitrary apportionment of grant. Schools with 240 and 108 students respectively received the same grant, while another with 230 students received twice the amount.⁶

1 P.P. (1849) XVIII
 2 Cole op. cit. I 114
 3 Art J. June 1849
 4 Ibid. September 1849
 5 Ibid. September 1850
 6 D.P.A. 1st Report 8

In 1850 it was calculated that only three Schools, and those the most recently founded, were not in debt. In Birmingham, "money stands in the way of every proposition for increasing efficiency". Leeds was "too far from the actual areas of production to be of direct benefit to designers and artisans". Norwich manufacturers were "disappointed that there are no cheap designs" and "preferred boys without any knowledge of design". In Spitalfields it was "unknown if any boys who have distinguished themselves have been able to find employment".¹

d) The foundation of the Department of Practical Art

i) Reasons for lack of success of the Schools of Design

Why were these Schools unsuccessful? There are many reasons. Private drawing masters saw them as a threat. Many of the students lacked preliminary training in elementary schools and a high proportion were, indeed, mere children.² There was the difficulty of arranging instruction in a multiplicity of trades. Manufacturers were often afraid that they would lose by a freer circulation of good designs. Some were apathetic since they could see little value in abstract training. The trade depression of the 1840's vitiated local support. (The Newcastle School was reduced to a "fancy fair and sale of work").³ Even when a teacher was successful in developing a School, he often moved on to a more lucrative position. Thus, J.A. Hammersley was "nominated from London" for a "more important and better-paid post at Manchester, from Nottingham".⁴ Nor did the provincial Schools always take kindly to central direction. When C.H. Wilson ceased to be Director of the Central School, he was moved to Glasgow, where, as Inspector, he had reported unfavourably on the former teacher, Macmanus. The latter's students petitioned, unsuccessfully, for his return.⁵

Cole may well have been correct in his arguments for better supervision of the provincial Schools, and his strictures on the financial arrangements were well founded. It is difficult to see, however, where there was disagreement over the principles for the direction of their curricula. The Art Journal suggested that the real struggle was not for causes, but for place.⁶ The fundamental mistake, said "B", in an article in that journal, was in the

1 Art J. December 1850
 2 As late as 1851, Belfast had 104 schoolboys on a roll of 270, Birmingham 178 of 394, and Limerick 43 of 105. (D.P.A. 1st Report 87-98)
 3 Art J. November 1849
 4 Art J. July 1849
 5 Ibid. March 1849
 6 Ibid. September 1849

appointment of artists, and not designers, as lecturers. "B" had to admit, however, that there was a dearth of artists with industrial experience, and that the stipends paid were hardly likely to attract men of outstanding talent.¹

ii) Cole's proposals

One of the Central School lecturers, Wornum, in an article on "The Government School of Design" in a later issue of the same periodical, attacked Cole and his scheme for "a well paid Deputy President to control the whole working machinery of the Schools". He defended the lectures already being given, as practical not abstract, and he proposed the foundation of Elementary Schools of Drawing from which students would proceed to the Schools of Design. Wornum was bitterly against what he called Cole's "scheme for pattern-shops" and said that many manufacturers were opposed to this idea.² Cole's scheme, in fact, was based in essence on the original and frequently reiterated basic principle of "the application of the Arts to manufactures". Outline drawing of ornament, modelling and colouring had been part of the curriculum from the outset. Instruction in design for special branches of industry, including fabrics and practical silk weaving, had been introduced at the Central School, but had been abandoned.³ When Wood Engraving had been practised in the Female School, which had opened in 1842, the wood engravers of London had sent a memorandum to the Board of Trade against such a course.⁴ Cole argues for a much more developed form of this work. Thus, in March 1850 he busied himself with drafting suggestions for the introduction of lithography into the Schools.⁵ As has been noted, he had long argued for the greater production of original designs there. Some of these had been produced. Labouchere, at the annual prize-giving at the Central School in 1850, "praised the exhibition of textiles and paper-hanging designs".⁶ In that year, twenty-one students sold designs to manufacturers.⁷ It would, however, have been difficult to argue that the Schools had been successful in producing designers. By the end of 1850, only four men who had passed through the Central School were employed as designers.⁸

1 Art J. September 1849

2 Ibid. October 1849

3 Bartley op. cit. 143

4 Ibid. 145

5 Cole MS Diary 1 March 1850

6 Art J. January 1850

7 Ibid. December 1850

8 Ibid. December 1850

Cole appears to have been mainly concerned in 1850 with his work for the Great Exhibition, which is detailed more fully below. He kept up his campaign in the Journal of Design. He submitted a further plan for the Schools, which has not survived, to Milner Gibson.¹ This was followed by a further query in the House by Gibson,² and another Select Committee.³ Cole was active, too, in the Society of Arts. He was a member of its Committee on Drawing Schools, and seems to have seen these as a means of progress outside the state system if all else failed. (The Athenaeum of the period has frequent references to these projected schools. As late as February 1852 it reported that the Society was about to issue copies and examples to schools in Bradford, Halifax and St. Marylebone which wished to be associated with it.⁴)

iii) Foundation and organisation

Cole's campaign came to a successful conclusion in 1851. In January of that year his friend Richard Redgrave became the General Manager of the Central School.⁵ Cole was offered the post of Secretary to the Schools in October.⁶ He received the formal offer in January 1852.⁷ In referring to Cole's appointment "to the new Department of the Board of Trade for the superintendence of Schools of Design" Trevelyan, of the Treasury, said that his "connexion with the Record Office" would "cease within one year".⁸ This would suggest that Cole was not prepared to give up his permanent post until he was assured of success in his new position. With the constitution of the Department of Practical Art⁹ later in that year, the Department of Science and Art, with which he was to be associated for the rest of his long life, may be said to have begun.

1 Cole MS Diary 18 July 1850

2 Hd. CXIII (1850) 106

3 P.P. (1851) XLIII

4 Ath. 28 February 1852

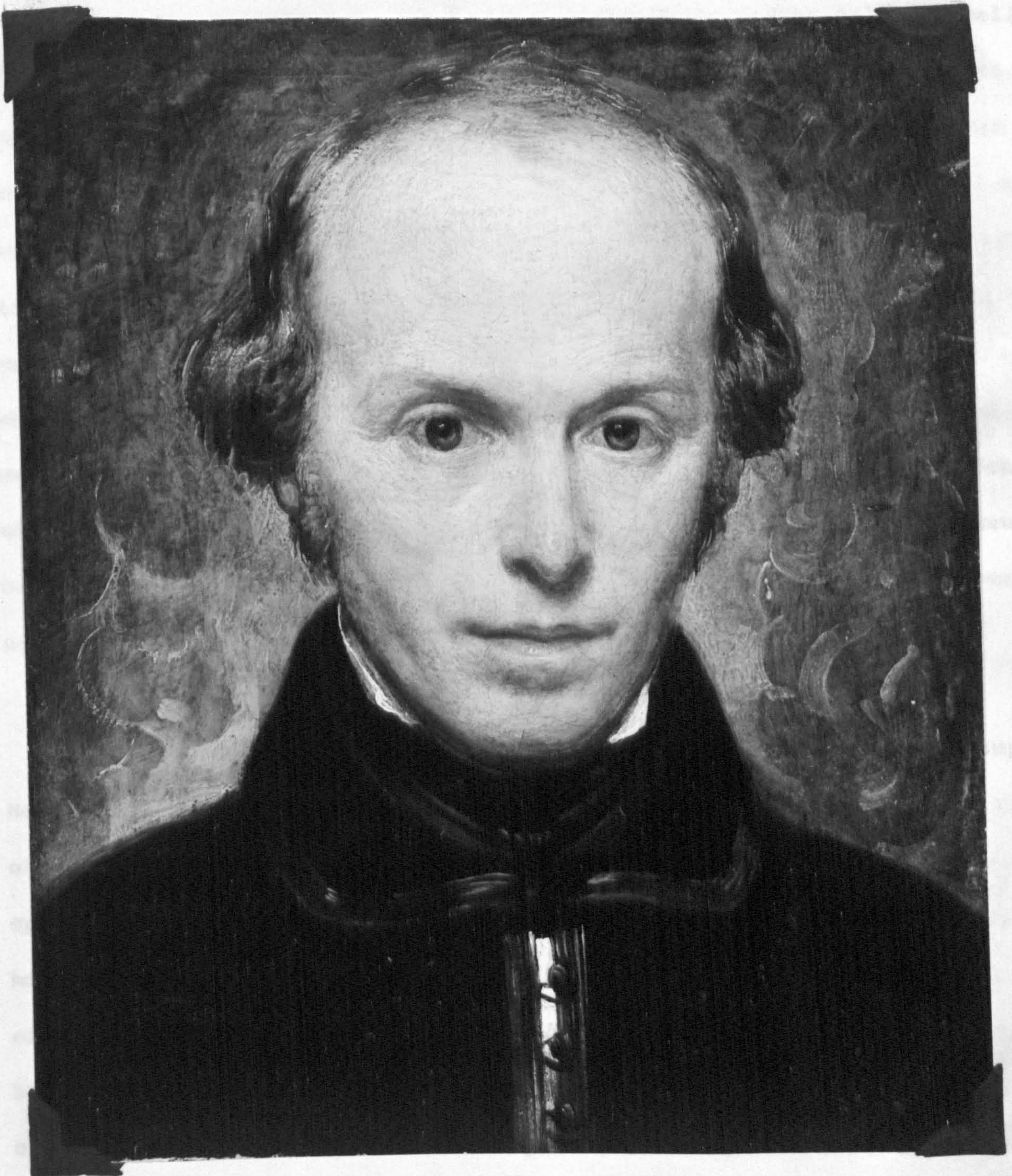
5 D.S.A. Calendar 1893 7

6 Cole MS Diary 31 October 1851. ("Lord Granville offered me Secretaryship of School of Design at £700 a year. Hoped I would not think Office too low a one. Above £700 would not be sanctioned by the Exchequer and be thought a job by the public knowing his intimacy with me. Asked me about the masters' attendance".)

7 Ibid. 14 January 1852 ("Mr. Labouchere asked me to undertake the management of the School of Design: was convinced that there ought to be defined responsibility. ... He was particularly friendly and spoke as if on an equally.") (sic) Northcote congratulated him on his "appointment as Minister of Design". (MS letter Northcote to Cole 2 February 1852).

8 MS letter Trevelyan to Booth (Board of Trade) 12 February 1852. (B.T. 1 239. P.R.O.)

9 The title was suggested by Cole. (MS letter Cole to Labouchere 15 January 1852) but, as will be seen, the Consort used the phrase as early as August 1851.



Richard Redgrave

(Self Portrait)

(National Portrait Gallery)

The Practical Art Department's First (and only) Report referred to Cole and Redgrave as "Superintendents",¹ but the actual division of duties was that Cole acted as Secretary and Redgrave was "Art Superintendent". Cole was "devoted to lay superintendence",² Redgrave believed, and he told Cardwell "that in Art, as Art, it was my opinion that prevailed, and your inspection was strictly as to management".³ He was invited, he said "to unite with Mr. Cole in forming the new Department".⁴ He fondly believed that his duties would be fewer so that he could devote time to his "profession as an artist" and he accepted a smaller salary for this reason.⁵ In actual practice, Cole was the organiser and initiator from the outset, preparing Memoranda on the whole organisation and functions of the Department. Redgrave consulted him on such matters as the provision of equipment, the ventilation of the School of Art, the format of the teacher's certificate, and changes in the Museum catalogue.⁶ The approval of both officers was necessary before new courses could be undertaken.⁷

iv) Difficulties with officials

Cole wrote to Labouchere on his need for "confidence and moral support".⁸ Not only did he have this; it was implied in the Art Journal that "the mischief of his appointment" was "entirely the work of Mr. Labouchere, who ... has been opposed by all the others in the office".⁹ It later said that the President had been "bamboozled".¹⁰ The appointment "was not viewed with pleasure by the officials of the Board of Trade".¹¹ From the outset, Cole was determined to brook no interference from them.¹² Soon after he took office, he was rebuked by Porter, the Secretary to the Board, for suggesting that he would prepare the estimates for the School of Design.¹³ After discussion with Henley,¹⁴ the President, Cole recorded that he was, in fact, "empowered to prepare estimates and Porter would sanction them ... regulation of fees not to be considered as financial business".¹⁵ Criticism, by an un-named official, of a Geometry book

1 D.P.A. 1st Report 3

2 Redgrave op. cit. 64

3 MS letter Redgrave to Cole 20 July 1853

4 Redgrave MS Memorandum on his services, 1872

5 MS letter Redgrave to Cole 7 October 1867

6 MS letters Redgrave to Cole "Saturday" 1852, 13 August 1852, 21 September 1852, 20 September 1854, 7 July 1856.

7 MS letter Playfair to Cole 6 November 1855

8 A.S.Cole op. cit. I 295

9 Art J. March 1852

10 Ibid. April 1852

11 Cole op. cit. I 297

12 Cole MS Diary 1 April 1852

13 Ibid. 24 February 1852.

14 Biographical appendix.

15 Cole MS Diary 21 April 1852.

which he planned to produce with Redgrave's co-operation fired him to send off a letter which said "your function is limited to expenditure ~~in~~ some of the inconveniences of the past system have arisen from the ~~the~~ responsibility of advisers, and I should not be blameless if I assented to the recurrence of the practice".¹ "Porter's functions were financial and nothing to do with principles of action", Henley told Cole, but the same day "Porter contended that he had a right given by Mr. Labouchere to control the Department".² On one occasion, Porter objected to classes "for carpenters, masons and joiners ... which had never been contemplated by Parliament". When Cole suggested that the "public would win" by attending such classes if they wished, Porter replied "Damn the public!"³ Cole was saved further trouble by external circumstances. Porter died suddenly "Of a gnat-bite which led to mortification" in September 1852.⁴ Henley told Cole that he would make it clear to Porter's successor "that his business was strict auditorship".⁵ There would appear to have been no further interference by officials of the central Board.

Cole was not only faced with opposition from these official quarters, but he also had to deal with officials and teachers of the previous regime in the School of Design. "Resignations will follow ... he is the master", predicted the Art Journal when he was appointed.⁶ W.S. Deverell, who had been the Administrative Assistant since 1842⁷ "would be the Secretary", Labouchere told Cole. "Not the best appointment, but could not get rid of him".⁸ He was soon "very awkward"⁹ and "one or other of us must go", Cole told him.¹⁰ There was a quarrel over office accommodation¹¹ at a time when Cole followed a suggestion by Porter that Deverell's son should be appointed to a clerkship in an attempt to improve relations.¹² Attempts were made by Cole, without success, to have Deverell transferred to the newly reorganised Patent Office, or to his own old Department, the Record Office, and he even tried to have him appointed as an Inspector.¹³ Redgrave, who would appear to

1 MS copy of a letter in Cole's handwriting, undated and not addressed, with a MS letter from Redgrave 18 June 1852.
 2 Cole MS Diary 26 July 1852
 3 Cole op. cit. I 299 records the expletive but does not name Porter. Cole named him later but did not give the full comment. (S.C.S.A. M.9)
 4 D.N.B.
 5 Cole MS Diary 8 September 1852
 6 Art J. April 1852
 7 Bell op. cit. 89
 8 Cole MS Diary 26 January 1852
 9 Cole MS Diary 13, 14 and 20 February 1852
 10 Ibid. 23 February 1852
 11 Ibid. 24 May 1852
 12 Ibid. 24, 25 and 27 May 1852
 13 MS letter Cole to Grey 26 June 1852
MS letter Cole to Granville 1 November 1852. Cole MS Diary 17 September 1852

have had a liking for him, told Cole that Deverell was "very uncomfortable".¹ Deverell himself "agreed that the Department would be better off without him."² After telling him that "the first step to any change in the Department would be his removal", Cole reported on his "incompetency" to the Treasury.³ (Even Redgrave had complained that Deverell had held up requisitions from provincial Schools for up to five months.⁴)

Deverell died suddenly in June 1853.⁵ "I have known him too long not to be grieved by his death", said Redgrave, but agreed with Cole that his demise would "help to facilitate our new arrangements".⁶ (Deverell's son, W.S. Deverell, became a First Class Clerk in 1856⁷ and served in the Department until 1861.⁸ Another son, W.H. Deverell, was one of the first of the pre-Raphaelite brothers. "Overwhelmed with the difficulties of keeping the family after the death of his father and mother", he died in 1854.⁹ Just as death had solved Cole's problem with Porter, so had it intervened with Deverell. As will be recorded later,¹⁰ Cole was eventually successful in getting rid of all the masters of the School who opposed him. The Consort was sorry to hear of Cole's difficulties, but he sagely remarked that "the old management" would "naturally set its face against change", and hoped that Cole would "devise some sort of chloroform which will allay, ... the labour pains of the Department".¹¹ As was to be the case throughout his career, Cole usually preferred the sand-bag to the soporific and in this, and in other matters, he was eventually successful. By the time that the "joint" Department of Science and Art was formed, Cole and Redgrave had had over a year to initiate their "new policies" and to remove or to neutralise the opponents of these, in the short lived Department of Practical Art.

e) A parallel need for Science Schools:

i) The School of Mines

Meanwhile, accidents in the mines had led to the setting-up in 1849 of a Select Committee of the House of Lords to enquire into the problem. Witnesses

1 MS letter Redgrave to Cole 20 September 1852

2 Cole MS Diary 13 October 1852

3 Ibid. 15 May 1853

4 MS letter Redgrave to Cole 21 September 1852

5 Cole MS Diary 26 June 1853

6 MS letter Redgrave to Cole 26 June 1853

7 MS.M 5.105

8 MS.M 14,50

9 William Gaunt The Pre-Raphaelite Tragedy (London Cape 1942) 49

10 Chapter IX section (a)(ii)

11 MS letter Grey to Cole 14 March 1852.

before that Committee spoke about deficiencies in the general education of the operatives. More significantly for the purpose of this study, the Committee referred to "little instruction of the special kind connected with mining operations within the reach of persons engaged in (supervisory) occupations" and said that "a want appears to be felt of facilities ... such as are provided by the Mining Schools and Colleges ... of the Continent."¹ In 1850, an Act of Parliament required the appointment of qualified engineers in the mines.² The "Government School of Mining and Science applied to the Arts" (to give it its original and later much changed title) was officially opened by the Prince Consort on 6 September 1851, as one result of this Act. It was in premises adjacent to the Museum of Practical Geology³ which had been transferred in May of that year to Jermyn Street. Its purpose in the view of one of its Professors, Lyon Playfair,⁴ was "to teach how to use the alphabet of Science in educating manufacturers ... Theory is the rule and practice is the example".⁵

Both School and Museum were products of the energy of Sir Henry de la Beche,⁶ organiser of the Geological Survey since its foundation. In 1835 he had successfully petitioned the Treasury for funds for a Museum which would illustrate the geology of Great Britain and the practical applications of geological science. The Museum had existed in temporary premises since 1837. In 1838 he had enlisted the support of the British Association in his campaign for the foundation of a Mining Record Office. This Office, headed by a Keeper who would also be a Lecturer in Physical Science, was sanctioned in 1840. Teaching by lectures had been approved in 1839⁷ but without equipment or endowment, this remained a dead letter until 1851. There was, presumably, some expressed support for the mining interests for the School, but in "its anxious first session ... they contributed not a single student".⁸

ii) Other institutions

There was also in existence in London a Royal College of Chemistry. Founded in 1845, it was run as a private venture with the aid of patrons of whom the Prince Consort was chief. A.W. von Hoffmann, a former pupil of

1 P.P. (1849) VII

2 P.P. (1850) III

3 The Museum was also referred to at this period as the Museum of Economic Geology.

4 Biographical Appendix.

5 Ath. 18 February 1851

6 Biographical Appendix.

7 Margaret Reeks The Royal School of Mines (London Royal School of Mines Old Students' Association 1920) 41

8 Ibid. 56

Liebig, was Head of the School. By 1849 it had increased its original roll of 20 students to 101, and was receiving over £1,000 a year in fees. While it was never really solvent as an independent body, it is notable as the first institution of its kind in England to be devoted to systematic laboratory practice.¹ The College, and the School of Mines, were, according to Lyon Playfair, "the only Colleges of Science at that time ... except Owens College, Manchester, and the Andersonian College, Glasgow".² There were, of course, Mechanics' Institutes up and down the country where "Science" of a kind was taught.³ J.S. Muspratt had opened a College of Chemistry in Liverpool in 1848. Edward Frankland believed that George Edmondson's College at Queenwood, Hampshire, founded in 1846, was the first school in England to introduce the teaching of practical science.⁴

The desire of the Prince Consort to remodel Oxford and Cambridge Universities to afford more help to Science teaching encouraged James Heywood, a Cambridge graduate barrister, M.P., and member of the British Association, to press for the appointment of Royal Commissions on these Universities.⁵ That on the University of Oxford, in 1852, thought that unless greater stress was placed on science there, the "clergy and gentry" would eventually "find themselves placed below persons in many respects inferior".⁶ Robert Lowe,⁷ then a barrister, submitted a letter to the Commission in which he argued strongly for the study of the Sciences. He quoted men he had met in Australia who "bitterly regretted that their costly education had left them ignorant of the laws of Nature".⁸ Others had been concerned at the state of Science education, too. That Parliament of Science, the British Association, had set up a Committee in 1849 to "watch over the interests of Science".⁹ This was composed of some sixteen members of both Houses who reported to successive meetings of the Association on progress, but who seem by their speeches, recorded in Hansard over the period to 1852, not to have pressed too hard for actual instruction. It was left to Heywood to argue the case

1 D.S.A. 1st Report 411-416, and Hofmann in The Quarterly Journal of Science, quoted in Nat. 4 May 1871
 2 Wemyss Reid Memoirs and Correspondence of Lyon Playfair (London Cassell 1899) 152.
 3 See especially D.M. Turner A History of Science Teaching in England (London Chapman and Hall 1927) and Mabel M. Tylecote The Mechanics' Institutes of Lancashire and Yorkshire before 1851 (Manchester University Press 1957)
 4 W.H.G. Armytage A Social History of Engineering (London Faber and Faber 1961) 151
 5 W.H.G. Armytage James Heywood's Resolution: Prelude and Finale Universities Review XXII 3 (May 1950) 139-153
 6 P.P. (1852) XXII 78
 7 Biographical appendix
 8 P.P. (1852) XXII 79-82
 9 Br. Assn. 19th Report XIX-XX

against fellow members of the Committee like Sir Robert Inglis, who consistently opposed any education measures which would result in greater expenditure, or in secularisation.

f) The Great Exhibition of 1851

i) Inception

The great spur to all schemes for improved science teaching was "The Great Exhibition of the Works of Industry of all Nations". It provided the occasion, and subsequent opportunities, for Lyon Playfair and Henry Cole, in their individual and sometimes co-ordinated ways, to influence the Prince Consort. This influence was to be of particular importance during the discussions on the disposal of the surplus of funds of the Exhibition, and was to direct the procedure which led up to the foundation of the Department of Science and Art.

Playfair first made the acquaintance of the Consort when he was called in to give advice on the ventilation and sanitation of Buckingham Palace, in 1843. (The investigations involved the release of gunpowder fumes to trace the courses of ventilation).¹ A chemist who had trained under Liebig at Giessen, he was firmly convinced of the need for education in the basic principles of science, for the men who would improve industrial methods. "Competition in industry is competition in intellect, and the nation which most quickly promotes the intellectual development of its artisans must by an inevitable law of nature advance", he said in 1851.² (He was still advancing this theme in 1870 when he declared "Just in proportion as different states prepare their populations by culture, will they increase in strength or dwindle in weakness".³) The part played by Henry Cole in the campaign for the reform of the Schools of Design has already been detailed. Playfair served the Exhibition as its general liaison officer, a post to which he was appointed on the recommendation of the Consort. Cole was the organising genius of the Exhibition from its inception.

Behind the Exhibition was a powerful pressure group, the Society of Arts.⁴ Cole had been introduced to this body by John Scott Russell,⁵ at that time its Secretary, in 1845. The Society had organised modest Industrial Exhibitions since 1760. Two small exhibitions were organised in 1844 and 1845.

1 Reid op. cit. 85 and Reeks op. cit. 5

2 Address at the School of Mines 1851 British Eloquence (London Griffin 1855) 131

3 Address at Birmingham 29 September 1870 (Birmingham and Midland Institute 1870)

4 Chapter XVII section (A)(a)

5 Biographical Appendix.



LYON PLAYFAIR



WARINGTON SMYTH



HENRY DE LA BECHE



JOHN PERCY



RODERICK MURCHISON

Lyon Playfair
First Baron Playfair of St. Andrews
and
Professors of the School of Mines

(Centenary of the Royal
School of Mines 1851-1951)

(Frontispiece)

A more ambitious Exhibition in 1847, for which Russell and Cole toured the industrial areas to persuade manufacturers to enter products, led Cole, with typical zest, to draw up a scheme for annual exhibitions in January 1848. The Exhibition of that year was the first to involve Government aid. Through the intervention of the Consort, who had become President of the Society in 1846, the Office of Works leased a site. In June 1849 Cole, Russell and others met the Consort at Buckingham Palace and suggested a large, quinquennial Exhibition for 1851. Cole visited the Exhibition held in Paris earlier in that month. The French had had much longer experience in the organisation of large Exhibitions than any other nation, but had decided not to make their 1849 Exhibition the first international one.

ii) Organisation

It was on the suggestion of Cole that the 1851 Exhibition was thrown open to exhibitors of all nations. (He was to claim the Exhibition as an outstanding example of Free Trade principles after its closure. He also believed that it was responsible for improvements in postal services, the reform of the Patent Laws, and the spread of international co-operation.¹ Others have credited it with the spread of excursion travel and the provision of cheap entertainment for the masses.²) From June 1849 Cole was the main spokesman and organiser of the Exhibition. He toured the country and enlisted the financial support, and the willingness to contribute exhibits, of the manufacturers. He organised Committees to raise local subscriptions. He proposed that the Exhibition should nominally be organised by a Royal Commission,³ although he himself was to be, not a Commissioner, but a member of the Executive Committee. (An example of his organising zeal is shown by the fact that 51,913 letters were received by, and 161,631 letters despatched by, the Executive Committee).⁴ It was Cole who persuaded a group of merchants to guarantee £50,000 at a point when the Exhibition threatened to founder.⁵ It was Cole who settled questions of space and arrangement, and first gained thereby his soubriquet of "King" Cole.⁶

1 Lectures on the Results of the Great Exhibition (London Bogue 1853) II 417-45:

2 C.R. Fay Palace of Industry 1851 (Cambridge University Press 1951) 90-100 and C.H. Gibbs Smith The Great Exhibition of 1851 (London H.M.S.O. 1964) 38

3 Letter from Cole to Phipps, 30 July 1849, quoted by C.R. Fay, op. cit. 4

4 K.W. Luckhurst The Great Exhibition of 1851 (London Royal Society of Arts 1951) 111

5 Luckhurst op. cit. 112

6 ed. Gwyn and Tuckwell Life and Letters of Sir Charles W. Dilke (London Murray 1917) I 7

Playfair's main tasks were to prepare classification and to superintend the awards of the juries.¹ (He paid tribute to Cole in his Memoirs as "the mainspring of the Exhibition from first to last. The public good was always uppermost. He was not selfish, but his purposes were frequently misunderstood. I bore for him a sincere respect".²) Granville acted as a Commissioner. In later years Cole was to look back upon this period of close contact with Granville as a "happy epoch".³ Stafford Northcote was Joint Secretary with John Scott Russell. He had at one point to press Cole not to resign,⁴ after their working in a new relationship had ended their period of estrangement at the time when Cole was campaigning for the reform of the Schools of Design.

iii) Results and lessons

The Exhibition proved to be a financial success beyond the dreams of its originators. Cole, seeking scenes of past glory, was to attempt to repeat this success, with ever diminishing results, into the 1870's. His cheerful enthusiasm, and that of his fellow workers, may have been initially harnessed to a project which was designed to show to the world that Britain still led in the field of industrial production. Had they wished, conversely, to make the point that there was need for education in the basic principles of science and art if Britain were to maintain that lead, they could hardly have been more successful. It is perhaps easy in the light of later knowledge to dismiss the majority of the Art exhibits as "tokens of a monstrous lack of taste"⁵ or "a great monument to the vulgarity of early industrialism"⁶. Certain critics of the time were, if less sweeping in their condemnations, obviously disturbed.

In a special supplement to the Art Journal of 1851⁷ entitled "The Exhibition as a lesson in taste", Wornum described the taste of the producers as "generally uneducated". To him French influence was predominant in Europe. He believed that British manufacturers were particularly inferior in silver work and in wood-carving. Richard Redgrave, in his Report on Design in the Exhibition, dismissed most of the ornament as "meretricious".⁸ A speaker in the series of lectures organised by the Society of Arts on the results of the Exhibition believed that in the use of colour in Art Britain had been "outstripped by

1 C.H. Gibbs Smith (op. cit. 30) quoted the case of a wig-maker who wished his exhibit to be shown in the Fine Arts section and discovered that it had been assigned to Animal Products.

2 Wemyss Reid op. cit. 114-115

3 Undated MS fragment in the Cole Correspondence

4 MS letter Northcote to Cole 8 February 1850

5 Pevsner Academies of Art (Cambridge University Press 1940) 248

6 Prouty op. cit. 23

7 Art J. Supplement 1851

8 Pevsner High Victorian Design (London Architectural Press 1951) 151

others".¹ In the same series of lectures, Playfair said "Its results are startling ... the nations most cultivating science and art are in the ascendant". He listed the sections of the Exhibition and showed that there were very few where British products prevailed. He went on to say that his "official reserve ... need exist no longer". He pointed the moral. "You may, and I hope, will soon, raise an Industrial University. France is pouring a hundred and fifty educated manufacturers into its provinces yearly from its Central College."² There was, he believed, a great need for "elementary" training, and the adaptation of "juvenile education".³

The comments on the Art products showed, with cruel clarity, that "the Schools of Design had had little influence on taste in industry".⁴ Cole could claim, however, in ending the publication of his Journal of Design that its mission had been completed with the Exhibition and the "general improvements in industrial Art".⁵ This was a piece of special argument for the cessation of publication of an instrument which had served one of its primary objectives, that of introducing reform into the organisation of the Schools of Design. Whether the Journal had had the same success in improving the standards of production is, at least, a debatable point.

g) Schemes for helping Science and Art education

The Exhibition provided the necessary convulsive therapy for more action in the field of education. In subsequent discussions on the disposal of the surplus funds of the Exhibition, its lessons were not forgotten. Memorials poured in from the provinces which had helped to provide some of the initial financial backing, urging the provision of Schools of Science. To be fair, however, this was only one kind of recommendation. A large room was filled with correspondence, containing other proposals, such as aid to emigration, the provision of national pawn-shops, gilding the dome of St. Paul's, helping exploration, and setting-up national soup kitchens.⁶ In an unsigned article in the Journal of Design the point was strongly made that no use should be made of the surplus to aid the Schools of Design, whose test of success should

1 Owen Jones, Superintendent of Works for the Exhibition, and an authority, and later author of a standard text-book, on Design. (Lectures on the Results of the Great Exhibition London Bogue 1853) II 253-301

2 The College des Arts et Metiers had been set up in 1829 as a private concern, and had been taken over by the Ministry of Commerce in 1838. (J. of D. December 1851 18). The Ecole Polytechnique had been founded in 1795. (Armytage op. cit. 109)

3 Lectures on the Results of the Great Exhibition I 147-208

4 ed. Singer, Holmyard, Hall and Williams History of Technology (Oxford University Press 1958)V783

5 Preface to bound Volume VI J. of D. (September 1851 - February 1852)

6 Ath. 15 November and 6 December 1851.

be their independence of aid. Sneers were made at a proposal from Sheffield for "Industrial Colleges". The old argument was raised that the highest manufacturing position was still held by Britain despite the absence of such Colleges. Colleges for the "young only", it was averred, "will not produce in years what Exhibitions can produce in months". Since the Exhibition had been an international effort, it was held, the surplus should be expended on further Exhibitions, as these would be likely to increase international co-operation.¹

The Consort was also concerned about this "international" aspect. Phipps,² one of his Secretaries, pointed out the need to "use the surplus for all nations" to Playfair.³ The interest of the Consort in the School of Mines and in the College of Chemistry has already been recorded. He was, in addition, "a delightful talker and well informed critic on Art questions" and he possessed a "regularly appointed painting room ... from which he regularly showed ... small pictures in progress".⁴ He appears, initially, to have wished to devote the whole of the surplus to centralising all the learned societies at Kensington Gore opposite the site of the Exhibition in Hyde Park. There would, he proposed, be four institutions, of Machinery, Manufacturing, Fine Arts and Raw Materials, which would correspond to the four sections of the Exhibition.⁵ All the Commissioners were opposed to this initial scheme, and at least one, Reid, "thought that it would tend to injure the Monarchy if he published it".⁶ The Consort believed, however, that he had the approval of his fellow workers in this scheme.⁷

A "School of Manufactures" or "College of Arts and Manufactures", or even a "Central University" was favoured by Playfair. He followed this up with suggestions for "provincial Industrial Schools", especially after he had made a visit to Birmingham, where he found that "each place is now agitating for a College to teach industry".⁸ Cole received a very definite refusal from the Consort to his suggestion that one third of the surplus might go to

1 J. of D. October 1851 48-50

2 Biographical Appendix

3 MS letter Phipps to Playfair 27 September 1851

4 J.C. Horsley Recollections of a Royal Academician (London Murray 1903) 135-136 (Horsley was Cole's collaborator on the first Christmas Card. His opposition in later years to the use of nudes as artists' models led to his being dubbed "Clothes Horsley").

5 Cole MS Diary 13 August 1851 and Memorandum by the Consort of 10 August 1851, quoted by Martin Life of the Prince Consort (London Smith, Elder 1876) II 569-573.

6 Cole MS Diary 14 August 1851

7 Letter from the Consort to his friend and adviser, Baron Stockmar, 18 August 1851, quoted in Martin op. cit. II 391

8 Cole MS Diary 7, 14, 19, 26, 28 August 1851.

the Society of Arts as initiators of the Exhibition.¹ He would seem at this point to have been more concerned with his assumption of responsibility for the Schools of Design, and to have contented himself with recording the progress of the proposals. The scheme for centralising the learned bodies was "quite given up" by the Consort by November 1851.² They did not appear to have taken kindly to the idea of an enforced move to what, for several years, would continue to be regarded as an inaccessible part of London. In their Report of that month the Commissioners decided against aid to Schools of Design on the grounds that these would further only the interests of British industry. They favoured a scheme for a permanent exhibition in the Crystal Palace, with the remainder of the surplus to be devoted to "extending the influence of Science and Art on the productive industry of all nations".³ A supplemental Charter was necessary for the Commissioners to go on with their proposals for the disposal of the surplus, and this was granted in December 1851. By this time, the Journal of Design had changed its tone. It now doubted the value of subsidies to further Exhibitions, which it said should be self-supporting, and believed that "no measures would be so good as those which would promote industrial education and extend the influences of science and art on productive industry".⁴ (There was a further tirade against "Colleges of Practical Soap-boiling, candle making and bleaching" the following year,⁵ but this was to be the last of the Journal's opposition).

h) Concrete proposals for the use of the surplus

i) The Consort's proposals

The pencilled draft here reproduced shows that the Consort was considering ways in which the surplus could be used for aid to education in a more direct form than merely "creating institutions at Kensington Gore", as early as August 1851.⁶ The placing of the embryo Departments under the Privy Council, and the fact that they were seen as separate, not united, are significant details. The substitution of "Secondary" by "Industrial", and "Applied" by "Practical", are also worthy of note. The inclusion of "Mining" in the

1 MS letter Phipps to Cole 25 October 1851

2 Cole MS Diary 2 November 1851

3 Ath. 15 November 1851

4 J. of D. December 1851 (VI 124)

5 Ibid. February 1852 (VI 164)

6 MS pencilled draft, noted by Playfair as "in the Prince's own handwriting, and given to me in August 1851". (Playfair Correspondence)

President of the Council
 Committee of Education
 Member
 Secretary Mr. Lanyon

Inspectors of Primary Education

~~Inspector of Industrial Education~~

Departments of

Physical Science

J. T. L.

In residence

See

London & Glasgow

H. Cole

Centre of College of
 Applied Science
 Practical

John of ^{Practical} Applied

Mining London & Dublin
 Geology
 Chemistry
 Metallurgy

curriculum of the "College of Practical Science" would suggest that the newly fledged School of Mines was seen as due for absorption, and the suggestion of an Irish institution is of interest.

The Consort appears to have taken no further action on a suggestion by Cole that part of the surplus should be used to set up scholarships for localities, on the basis of one scholarship to each local £500 contribution, to the projected institutions.¹ By January of 1852, the Consort had decided to

¹ MS letter Cole to Grey 28 March 1852

suggest the purchase of "plenty of ground at Kensington ... to provide a collection of the History of Manufactures, with lectures and so on" and to help in the reform of the Central School of Design, which would, as shown above, be called a "College of Applied Art".¹ By this time, Cole had obtained his appointment as Head of the new Department of Practical Art, and the Consort asked for his aid in connecting it with the proposals.² On wider issues, Cole suggested that the Consort's plans were too ambitious to be supported only from the surplus, and asked if any ideas had been produced for additional sources of finance.³ In late 1851, the Athenaeum charged that the Commissioners had, in fact, turned down a Government offer of £150,000, on loan, on the grounds that they planned to use the surplus for international, and not merely national, purposes.⁴

ii) Playfair's contributions

The idea of a scheme of "industrial education", with the Schools of Design as provincial centres united with a "University of Mines and Manufactures" in London, empowered to grant degrees and diplomas, and "connected with our Museum as representing metallic manufactures" was enthusiastically pursued by Playfair. Although he was sure that his scheme would be the ultimate one adopted, he admitted that the time was "not yet ripe for execution".⁵ "Playfair came, and thought that I was only for Art, and not manufactures" Cole recorded in February 1852.⁶ This was followed by a visit to Cole by de la Beche, who told him "that he proposed that his Department should belong to the Board of Trade, and we would work together, with a Museum in common".⁷ de la Beche told Playfair in August of that year that he thought that "the two institutions can be worked excellently well in harmony". His insistence on "an understanding so injury not done to our place" would suggest that he entertained some doubts from the outset.⁸ In a second letter on the same day in August,⁹ he added "better some agreement with Practical Art School" and pointed out "now under two Departments".¹⁰ The next day he referred to

1 Cole MS Diary 5 January 1852

2 Ibid. 19 February 1852

3 MS letter Cole to Grey 31 December 1851

4 Ath. 6 December 1851

5 MS letter Playfair to de la Beche 20 August 1851

6 Cole MS Diary 22 February 1852

7 Ibid. 6 April 1852

8 MS letter de la Beche to Playfair 3 August 1852

9 MS letter de la Beche to Playfair 3 August 1852

10 The Museum and the Geology Survey were under the Department of Woods and Forests, while the Department of Practical Art was, of course, under the Board of Trade.

"co-operation in lectures at School of Practical Art ... to avoid duplication".¹
 He was glad to hear of Playfair's good relations with Cole, and believed that
 "mutual co-operation and good will not only honest and fair thing, but a real
 source of progress",² after Playfair had suggested to Cole that "our Depart-
 ments ought not to run a race against each other".³

iii) Further developments

The Second Report of the Commissioners, issued in November 1852, examined foreign provision for industrial education and pointed out the deficiencies in Britain. It stressed the need for expanded accommodation for the government-aided institutions already in existence and enlarged upon the Consort's original scheme for the purchase of land at Kensington. Two sides of the proposed site were to be occupied by Departments of Practical Art and Practical Science. There would be Science, Trade and Art Museums, and rooms for lectures and discussions. Space would be available for the learned societies if they wished it. Little or nothing was said about instruction in the projected institutions.⁴ This was possibly because of the Consort's fears of opposition. He warned Playfair, through Phipps, not to "use the name of College or University' ... he does not wish to upset vested interests ... Instructive it must be, but a plan for an educational system ... attacks ... fears and jealousies". Playfair noted on the letter "Showing Prince a little frightened as to educational prospects".⁵

There would by now appear to have been some firm agreement that Playfair was to be in charge of a Department of Practical Science which would parallel the Department of Practical Art, without being united with it. In late October 1852 the Consort discussed the scheme with Disraeli, Chancellor of the Exchequer in the Derby administration. The 25 to 30 acres of the original scheme had by now grown to 90. The cost was to be met by a gift from the surplus of £150,000, and a government loan of a like amount.⁶ Grey,⁷ the Prince's Secretary, wrote in confidence to Cole and said that he believed that "this government is a much better one for our artistic and educational purposes than the last".⁸ The Queen's Speech on the opening of Parliament in

1 MS letter de la Beche to Playfair 4 August 1852
 2 MS letter de la Beche to Playfair 13 August 1852
 3 Cole MS Diary 11 August 1852
 4 Ath. 14 November 1852
 5 MS letter Phipps to Playfair 19 August 1852
 6 Martin op. cit. II 445
 7 Biographical Appendix
 8 MS letter Grey to Cole 2 November 1852

November 1852 referred to "a comprehensive scheme for the advancement of Fine Arts and Practical Science".¹ Cole recorded that he had been told by Grey that these words "had been added spontaneously" by Derby, the Prime Minister.² (Punch called it "a strange homage to the claims of Science and the Fine Arts" and pointed out that Derby had recently made "a munificent offer" of a £50 pension to the widow of Birkbeck, the educational pioneer, which had been "courteously refused".)³

The Consort's biographer later suggested that the chief motive of the Government in agreeing to the loan was to obtain ground on which a new National Gallery could be built, away from the polluted atmosphere of Central London.⁴ In introducing the debate on the loan in December 1852, Disraeli specifically said that this was not a vote merely for this purpose. He talked of "the revolution in circumstances which have hitherto given superiority to our manufactures". He said that the time had come when "the intellectual element becomes one of the most important elements of competition". He referred to the opinions of the Great Exhibition jurors "which it was then unnecessary too ostentatiously to announce" and pointed out the Continental superiority in the provision of facilities for industrial education. He spoke of "bringing to bear the united influence of Science and Art in all their forms ... to afford to the people of our country a complete industrial education ... and to improve ... the humbler classes". He said that there would be on the site a National Gallery, a Commercial Museum, a Museum of Machinery, and a "fourth division of the National Gallery ... devoted to the sources of ornament and decoration".⁵ In his use of terms such as "intellectual element" and in his argument that improved means of locomotion had negated the advantages originally given to Britain by the possession of raw materials and fuel, Disraeli echoed Playfair's speech given at the close of the Exhibition. He was, perhaps, speaking to a brief which Playfair had supplied to the Consort.

Most speakers in the debate which followed were in favour of the scheme. The value of "this foolish attempt to force the population into a taste for the fine Arts which Nature has not given them" was doubted by Drummond, and Joseph Locke believed that Schools aided by government would "lessen the individual

1 Hd. CXXIII (1852) 19
 2 Cole MS Diary 3 August 1852
 3 Pch. 1852 226
 4 Martin op. cit. II 445
 5 Hd. CXXIII (1852) 1020-1026

exertion which has been the mainstay of the mechanical industry of the country". Despite the wish expressed by the Consort to Playfair that such a term should not be used, the columns of Hansard devoted to the debate are headed "Industrial Universities".¹ In the debate, Disraeli said that the major point at issue was the purchase of the land, and that details of the scheme for "industrial education" would be given later. The Consort believed that "no one seemed to understand the full extent of what was proposed". He thought that it would now "be possible to act on Schools of Design, School of Mining, etc."² In sending Cole a pre-publication copy of the Commissioners' Second Report, Grey told him that Derby and Disraeli had taken up the scheme "most cordially". He hoped that they might be able to "found an estate which will immortalise the Prince's name and his efforts for Arts and Science".³ The government loan eventually totalled £177,000. With the addition of the Commissioners' gift which was raised to £165,000,⁴ 87 acres of land were purchased at Kensington. The land was to be used in perpetuity for "purposes of Art and Science".⁵

i) The formation of the Department of Science and Art

The scheme for the purchase of the Kensington site was not universally popular.⁶ The Commissioners were to sever their connection with the government before a decade had passed, as will be detailed.⁷ The proposals for instruction and for the precise use of the land were to remain somewhat general for several years. The Kensington site, and the Department of Science and Art, were, however, to be linked together for the rest of the century. Two days before the debate on the government loan, Grey wrote to Cole on the need to "educate the public on the future use of the site".⁸ In reply, Cole remarked with his usual perspicience that "whatever is done initially with Gore House must be a success, or the public will attribute its failure to its site."⁹ Later, he suggested that the prime aim of the Commissioners should be to expend their money to make the site attractive "and then public money will surely follow". He knew that "pinches especially will come when the House of Commons is asked for money".¹⁰

1 Hd. CXXIII (1852 1026-1036)

2 MS letter Grey to Playfair 7 November 1852

3 MS letter Grey to Cole 7 November 1852

4 Hd. CXLII (1856) 2113

5 E.A. Bowring South Kensington N.C. 1877 I 563-582 II 62-81

6 Bowring (op. cit.) records an un-named authority who "mourned the shilling surplus of the masses, sunk in a cabbage garden at Kensington Gore".

7 Chapter II section (c)(iv)

8 MS letter Grey to Cole 5 December 1852

9 MS letter Cole to Grey 13 December 1852

10 MS letter Cole to Grey 4 February 1853.

By that time, more definite plans had been made for the Department of Practical Science. Grey asked Playfair to come to Windsor "to talk on the proposed School of Practical Science" in January 1853.¹ He afterwards said that the Consort was glad to hear that de la Beche was "satisfied with the proposed arrangements".² Later in January Playfair and Cardwell,³ the President of the Board of Trade, came to see Cole at Marlborough House. They had been to the Consort the night before. (Playfair told Cole that he should have been a member of the party. Cardwell's letter to Playfair on the visit, however, says "summoned with you to go to the Prince at 2 p.m." and makes no mention of Cole.⁴) The new Department, they told Cole, was to be a united one, of Science and Art. De la Beche would remain as Director of the School of Mines, and Cole and Playfair would be Joint Secretaries.⁵

Cole was not pleased about the proposed title of "Department of Science and Art". In fact, he used the term "Department of Art and Science" in his discussions with Cardwell, and "objected to Science being placed before Art as less popular".⁶ In February 1853, Playfair and Cole met Cardwell at his house "with all the information to fill up the blanks finally."⁷ In March, Cardwell told Playfair that he had seen Aberdeen, the Premier, about his formal appointment.⁸ In that month, when the new Department was formally founded, Playfair told Cole that Cardwell proposed that Cole's name should come first in the appointments of the joint Secretaries, but that the title would remain with "Science" before "Art".⁹ Six days later, Playfair selected his rooms at Marlborough House, and "agreed that the Department should be worked as a unity".¹⁰

The Derby government had fallen in late December 1852. In his speech on the new government's educational programme in April 1853, Lord John Russell devoted only a little space to the proposals for the new Department. (In

1 MS letter Grey to Playfair 9 January 1853
 2 MS letter Grey to Playfair 6 February 1853
 3 Biographical appendix
 4 MS letter Cardwell to Playfair 19 January 1853
 5 Cole MS Diary 21 January 1853
 6 Ibid. 9 January 1853
 7 MS letter Playfair to Cole 17 February 1853
 8 MS letter Cardwell to Playfair 1 March 1853
 9 Cole MS Diary 8 March 1853
 10 Ibid. 14 March 1853.

the speech, which occupies 27 columns of Hansard,¹ the proposals fill only one third of a column²). There would not be large expenditure, said Russell. Science and Art Museums would be opened. He hoped for "instruction on technical questions relating to Art and manufactures" and he announced the appointments of Cole and Playfair. There was no reference to these proposals in the subsequent debate.

1 Hd. CXXV (1853 522-549

2 Ibid. 522

CHAPTER TWO

TAKING SHAPE

(1853 - 1858)

a) General Policy

- i) The basis of the schemes
- ii) Sources of income for Science and Art Schools
- iii) The organisation of government aid
- iv) The first suggestions of "payment on results"

b) The administrative pattern

- i) Division of responsibilities
- ii) The work of Lyon Playfair
- iii) The relationships between Cole and Playfair
- iv) The work of Cole and Redgrave
- v) Administrative Headquarters

c) Political Responsibility

- i) Placing at the Board of Trade
- ii) Political chiefs and their influence
- iii) The transfer to the "Privy Council"
- iv) The end of the "partnership" with the Commissioners

d) Institutions and Instrumentse) Relations with the Education Departmentf) Summary of the Period

a) General policyi) The basis of the schemes

The officials of the Department set out to develop schemes which would succeed, they trusted, in raising industrial standards. In the Metropolis, a Central Museum would "inspire and instruct" by means of its collections, and two Central Schools would train teachers. In the provinces, Schools would be encouraged to develop by means of financial inducements, but they were to be directed to rely in the main on "self support".^{1A} The outlines of the progress of the Central Institutions will be given later in the work,^{1B} but reference must be made from time to time of the ways in which their developments affected, and were affected by, general policy.

ii) Sources of income for Science and Art Schools

"Voluntary enterprise in promoting instruction ... should be fostered ... pecuniary assistance granted by Parliament should encourage its development and not supersede it" wrote Alan Cole, as a summary of "the feeling that influenced my father's work".² There can be little doubt that Cole was sincere in his repeated avowals of the virtues of self support.³ Samuel Smiles' Self Help, his Diaries show, was his favourite bed-side reading. "The ability to decline any pecuniary assistance from the government" was seen by Cole for most of his life as the "height of a School's ambition",⁴ and "Schools could not succeed if their funds are independent of their own exertions".⁵ This principle of self support was to be the cardinal feature of the Department's policy: its financial aid would be given only if there were guarantees that it had been merited.

There could be four sources of funds for local Schools. The principle of subscriptions by wealthier members of the community (inspired by moral motives, in wishing the condition of their fellow men to be improved by education, or by material ones, in hoping that improved techniques and "knowledge" would result in economic returns) was never highly regarded by Cole. Subscriptions, he felt, "tended to depress local opinion".⁶ They involved "pestering the middle classes to subscribe ... they got very little in return ... The system was vicious and ... vitiated Schools."⁷ "The

1A Chapters VI and VIII

1B Chapters VII and IX

2 A.S. Cole op. cit. I 2793 Cole proposed to the Society of Arts a scheme of public lavatories for the Metropolis "on a system of self support". It was a failure. [Hudson and Luckhurst The Royal Society of Arts 1754-1954 (London Murray 1954) 226]4 Cole Address of 2 June 18525 Cole Address of 24 November 18526 D.S.A. 1st Report xxxvi

7 S.C.S.A. AA.299 and 304

begging bowl" was "taken around".¹

The second source of income was the fees paid by students. "No one values what may be had for nothing, especially those who can afford to pay", argued Cole.² From the outset, therefore, there would be greater reliance on fees, which were to be approved by the Department.³ One of the major courses of discontent in the old Schools of Design had been regulations which limited instruction to members of an ill-defined "artisan" class. The Department later said that "the regulation an artisan could not be maintained, and was violated in all Schools."⁴ Schools had been taken to task by Cole for allowing a preponderance of "middle class" students to enter.⁵ Once in power, Cole claimed that it would be "wrong and ineffective to limit instruction to artisans".⁶ A better practical point was made by Redgrave. He believed that "artisans" had often neither the time to profit beyond elementary training, or the status to enforce better practice.⁷ The principle that "the rich should be induced to come in" was, Cole later stated, approved by Henley.⁸ This system could be operated in the Art classes, where the middle classes could be encouraged to cause their children to attend, since "Art" was seen as a "useful accomplishment". Students in "morning classes ... for the middle classes and gentry" would pay for the full value of instruction. Evening students would pay less, since they would receive less individual instruction. Students could attend whichever classes they wished, so long as they paid the appropriate fees.⁹ It was suggested that the Department "had legalised what it could not prevent".¹⁰ This concession to the middle classes, as a primary means of support, led eventually to much confusion, on the definition of an "artisan student", to difficulties with the masters, who preferred the work which brought higher fees from the middle classes, and to opposition from "private" schools who felt that "subsidised" Schools were driving them out of business. Science classes, as will be seen, could never rely on the "middle class fees" and this was to be a factor in their relatively slow development.

1 S.C.S.I. A. 285

2 Cole Address of 24 November 1852

3 D.S.A. 1st Report 113

4 D.S.A. 5th Report 36

5 J. of D. July 1849

6 Address of November 1852

7 Address on Principles of Teaching Design October 1853

8 S.C.S.I. A. 285

9 D.S.A. 2nd Report 33-62

10 Engt. 27 August 1858.

The third possible source of funds was rate aid. This had been suggested by Cole during his campaign for reform.¹ "A rate for country schools" was still his aim in 1851,² and he urged this in a speech at Bradford in 1852³ after Labouchere had agreed that "rates would relieve the Board ... from applications".⁴ Cole found a supporter in Granville⁵ and an Act which made such aid possible was passed in 1855.⁶ This was, however, to be the least successful of Cole's endeavours. In the first years, although others tried and failed, only one area achieved this form of aid. "Public appreciation of these objects is not yet sufficiently advanced to tolerate such a tax", it was admitted in 1857.⁷

iii) The organisation of government aid

However hard the Department tried to encourage self support by fees, subscriptions, and rate aid, there would still be need for a fourth form of support, government aid, even when supply of schools followed demand, and did not precede it, as Cole stressed.⁸ The problem was particularly acute in Science Schools. In a Report on the London Mechanics' Institute which he prepared in the last year of his service with the Department, Playfair pointed out that "the sons of the middle classes" would "attend the Universities" if they "wanted instruction in Science". Such classes were "not likely to be self supporting if teachers are properly remunerated and not likely to be worth much unless they are". He advised, therefore, "some means of external support ... by subscriptions, contributions or State aid."⁹ In an address given at about the same time, he repeated his belief that Science Schools would never attract middle class fees and hinted at payments on results: "We consider that a given amount of knowledge is so much, and ... will reward ... the teacher who communicates it and the learner who learnt it, he said."¹⁰ Giving "assistance halfway, but no further" had already been agreed to by Cole five years before this,¹¹ so long as "master's exertions would be stimulated by identifying their interests with the extension of instruction."¹² This was initially to be done by basing Art teachers' remuneration on payments

1 J. of D. July 1850

2 Cole MS Diary 12 November 1851

3 Ibid. 2 February 1852

4 Ibid. 28 January 1852

5 Ath. 12 August 1854 and Cole MS Diary 1 August 1854

6 The Museums and Public Libraries Acts 1855 (18/19 vict.C.40 and C.90)

7 D.S.A. 5th Report 24

8 Address of November 1852

9 P.P. (1857-1858) XLVIII (327) (Report of Dr. Playfair on the state of the London Mechanics' Institute in Southampton Buildings 16 December 1857)

10 Address of 1857 on "Science instruction".

11 Address of November 1852. 12 D.S.A. 2nd Report xiv

on the certificates they obtained by examination, and by allowing them to keep all the fees paid for work they performed in Elementary Schools, together with half the fees received in the Schools of Art.¹ (The Science payments were to be on roughly the same basis.) Similarly, the free supply of examples which had been made to the old Schools was replaced by a supply at half cost price.² (There was an increase in demand, and Cole argued that this justified a reduction in aid. He expected a limit of about £2,000 a year on this feature.³) It was thus believed that "while the total emoluments will increase, there will be a proportional reduction in costs to the state".⁴ There were, of course, the "old" Schools of Design where the masters received salaries, guaranteed by grant, which bore no relation to "exertion", and the task of doing away with these arrangements and substituting some other method of support proved long and difficult. There were difficulties, too, in making the central teaching Institutions self supporting, but, as will be recorded,⁵ Cole attempted to do this, and met with general success. The Treasury welcomed the principle of "self support": its officials approved the initial schemes with the proviso that "future grants will be for instruction only", and hoped that the bulk of expenses would be met by fees.⁶ More precise details of the schemes for Art and for Science teaching are given later in this work, but it was on "self support" that they were founded and would continue to develop.

iv) The first suggestions of "payment on results".

"If you can give the Treasury a liberal view of public requirements, and cure them of continual fear of the House of Commons, and also cure the latter ... of alternative (sic) fits of liberality and niggardly stinginess ... you will be the greatest administrative reformer of the age", Cole was told by Grey.⁷ "Pinches" were expected by Cole "especially when the House of Commons is asked for money."⁸ Early relations with the Treasury were good. The Department was popular, Cole was told by a Treasury official,⁹ the success of the Museum had added to goodwill,¹⁰ and the Consort was very sanguine.¹¹ Relations soon

1 D.P.A. 1st Report 9
 2 Ibid. 4
 3 D.S.A. 2nd Report ix
 4 D.P.A. 1st Report 42
 5 Chapters VII and IX
 6 D.S.A. 1st Report Appx. "A"
 7 MS letter Grey to Cole 5 August 1853
 8 MS letter Cole to Grey 4 February 1853
 9 Cole MS Diary 21 May 1852
 10 Ibid. 14 October 1852
 11 MS letter Grey to Cole 6 April 1853.

changed for the worse. "An insidious letter" from Wilson of the Treasury caused concern in August 1853¹, and "the vote for the School" was "nearly absorbed" by December.² The officials had, therefore, to consider means whereby they could make maximum use of resources, and also convince the Treasury that grants were achieving "value for money".

A paper on the "Madras" system³ was produced by Redgrave in early 1854.⁴ This, despite its allure of cheapness, does not seem to have been given much consideration. The following year, Wilson was "very cross"⁵ but the estimates "passed very smoothly".⁶ (According to Hansard there was no debate⁷) A limited scheme designed to encourage students by awarding medals on the results of inspection of Schools of Art was tried in that year, and it was argued that it was "legitimate for the State to make a small allowance ... when the work has been tested as having been soundly and legitimately carried out".⁸ (A similar scheme of medals and small money prizes was tried in Irish Science Schools⁹) By extending such a scheme to payments to teachers, it was argued, "expense would be comparatively small, and would always be under immediate control ... since the papers could from time to time be increased in difficulty ... as the knowledge of Art becomes more general."¹⁰ The scheme particularly appealed to Playfair, who was faced with the difficulty of encouraging Science teaching which could not, at that time, expect the same "middle class" support as that which was given to Art. In his Report on the London Mechanics' Institute, to which reference has been made, he went on to say that "the most healthy mode (of State aid) would be paying for the successful results of teaching as evidenced by examination and inspection, small rewards to the taught, and considerable premiums to classes and institutions ... to ensure their official character".¹¹ He repeated this suggestion in his last Report, and advised a pilot scheme on a small scale.¹² (Playfair seems to have doubted the value of the scheme in Art Schools, however. He thought that certificate payments to teachers should be enough inducement.

1 Cole MS Diary 3 August 1853

2 Ibid. 9 December 1853

3 This was the "mentorship" system developed by Bell.

4 Cole MS Diary 26 January 1854

5 MS letter Playfair to Cole 21 July 1855

6 MS letter Playfair to Cole 27 July 1855

7 Hd, CXXXIX (1855) 1427

8 D.S.A. 3rd Report xxiii

9 D.S.A. 4th Report 142

10 Ibid. 53

11 P.P. (1857-1858) XLVIII (327)

12 D.S.A. 5th Report 20

Cole on the other hand thought that these "would not meet the needs of the poorer schools."¹) There was, therefore, limited use of the scheme of "payment on results", with which the Department would be so closely identified for all save a few years of its remaining career, from 1856. It would, in its turn, influence its sister Department, as will be detailed.² The "efficiency" of the scheme possessed two major attractions for Cole. On the one hand, it could be seen as a means of encouraging exertion and self help and of avoiding the "State interference" which was "the error of continental systems of taking a principal and dominant part in secondary education".³ On the other hand, it could be used to adjust available sums so that the Museums, which could never in any sense be "self supporting", could continue to receive aid. In December 1856 Cole was told by Wilson of the Treasury that "he had been guilty of high crimes and misdemeanours ... after disregarding many official rules on appropriations."⁴ (Cole himself did not record the reprimand!)

In general, it could be argued that the scheme of self support for the Schools of Art had been justified in the early years. The numbers of Schools had greatly increased,⁵ and fees were rising steadily. (By 1857 they equalled the amount given in grant aid.⁶) There had been less success with Schools of Science, but a foundation had been laid for future development.

b) The Administrative Pattern

i) Division of responsibilities

As has been noted, the Prince Consort's original scheme envisaged two Departments, of Practical Art and Practical Science, and Playfair's reference to "our Departments"⁷ has also been recorded.⁸ In the event, the "new" Science Department was to be joined to the fledgling Practical Art Department, and it has not been possible to discover any statements of the reasons for this combination. One possible factor may have been that both Science and Art instruction were envisaged in Schools of Design which would become "Schools of Industrial Knowledge". Another reason must have been that if both Departments were to have their headquarters at South Kensington, joint administration would have appeared to have offered chances of more efficiency,

1 Cole MS Diary 16 May 1856
 2 Chapter III section (g)(ii)
 3 Cole Address of November 1857
 4 Redgrave Memoir 169
 5 Table XVII
 6 D.S.A. 5th Report 23
 7 Cole MS Diary 11 August 1852
 8 Chapter I. section (h)(ii)

especially if Museums were to form part of their activities. The allocation of ministerial responsibility for the new, joint, Department can, however, be explained and is detailed later.¹

The Board of Trade looked forward to "honourable rivalry between the two divisions of the system" on the formation of the Department.² While Cole and Redgrave made no public pronouncements on the topic, they did not welcome the accession of the Science division. As had been recorded, Cole lost his fight to have Art placed before Science in the title. Science "was, in fact, an incubus ... it was not our wish that the relation had begun", Redgrave told Cardwell,³ "Anything that will aid in your great work", Playfair had said in 1852 when he had offered to lecture in the Central Art School,⁴ and relations, as will be detailed, were good on the whole. The appointment of Cole and Playfair as joint Secretaries meant that in theory the two divisions were of equal standing. Playfair's responsibilities covered the organisation of the Animal Museum⁵ while Cole continued as administrative Head of the Art Division, with Redgrave as the Art Superintendent. Later, both Cole and Playfair were to say that any specialist knowledge they might have possessed in their respective fields could have been seen as an advantage, but was not essential for their appointments.⁶

There was much over-lap of duties. There are frequent references in correspondence to common interests in the Art School, Navigation Schools and so on. All three officials wished to include inspection and "propaganda" among their duties, and there must have been times when all three were absent from headquarters. This was advanced as a reason for re-organisation in 1855, when Playfair became sole Secretary, with Cole as "Inspector General".⁷ In fact, Playfair continued with his provincial tours, which included some inspection, and "continued to visit the leading countries of Europe in order to become acquainted with their systems of education".⁸ Cole spent much of his time in central administration. He drew up the Agenda for meetings of the Board, and contributed memoranda on all aspects of the Department's activities.⁹

1 Chapter II Section (c)(i)

2 D.S.A. 1st Report Appx "A"

3 MS letter Redgrave to Cole 20 July 1853

4 MS letter Playfair to Cole 28 July 1852

5 MS letters Playfair to Cole 18 March 1853 and n.d. (1853?)

6 S.C.S.I. AA. 339 (Cole) and 1065 (Playfair)

7 D.S.A. 2nd Report v-vi and MS.M 3. 123-124

8 Wemyss Reid op. cit. 149

9 MS.M 7. 1 et seq.

As Secretary, Playfair consulted Cole on matters which were his special concern before issuing orders or decisions¹ and gave his advice on Art matters, particularly on Cole's scheme for payments on results in Art.² Cole, in his turn, commented freely on Science affairs, as will be recorded.

ii) The work of Lyon Playfair

The difficulties experienced by the chief officials with their political chief, Cardwell, and with the Head of the School of Mines, de la Beche (and his successor Murchison³) which will be recorded,⁴ seem to have affected Playfair more than they did Cole or Redgrave. Within months of his appointment, Playfair was considering whether to apply for the Edinburgh Chair of Chemistry⁵. He was interested in the post of Secretary to the newly formed Board of Health in 1854.⁶ In 1855 he applied for the position of Master of the Mint⁷ but withdrew his application because he felt that the eventually successful applicant, Graham, "was my friend ... and better qualified for the post".⁸ His general frustration, which was further complicated by the "slowness of progress" in provincial developments, and the illness of his first wife, which led to her death in 1855, caused him to give less and less time to the affairs of the Department. "He is away so often, and unacquainted with our general business ... (he) does not go into all the minutiae" Redgrave told Cole.⁹ "Playfair has taken himself off for a holiday of six weeks", he reported later. "There has been little less but absence ... all year. He was to draw up a minute on the Animal Museum, but nothing has been done".¹⁰ At Christmas 1855, Playfair was "off to Cornwall for a week. He says 'there is nothing to do, so we may as well be away'. I know I find plenty" complained the over-worked Art Superintendent.¹¹

On his second marriage, in 1857, to "a lady of some fortune", Playfair was "no longer dependent on the income derived from work" and arranged to give only half his time "as Inspector of Schools of Science"(sic).¹² In 1858, he renewed his interest in the Edinburgh Chair of Chemistry.¹³ He feared that

1 For example, criminal cases involving students at the Central Art School, each of which was referred to Cole and not to Redgrave (MS letters Playfair to Cole 18 March and 18 August 1856).

2 Cole MS Diary 18 May 1856

3 Biographical Appendix

4 Chapter II Section (c)(ii) and Chapter VII sections (a)(ii) to (vi)

5 Cole MS Diary 14 July 1853

6 Ibid. 4 August 1854

7 Wemyss Reid op. cit. 163

8 MS letter Playfair to Lowe 20 September 1869 (This was a second application for the post on the death of Graham).

9 MS letter Redgrave to Cole 31 July 1855

10 MS letter Redgrave to Cole 10 September 1855

11 MS letter Redgrave to Cole 22 December 1855

12 Wemyss Reid op. cit. 164

13 Cole MS Diary 20 May 1858

his sponsorship of the Sunday opening of Museums might go against him¹ and Huxley's friend Hooker believed that "Playfair is not likely to get Edinburgh. ... He will have to refeather his nest at Kensington Gore and work back to his old post as Scientific Secretary. (God . help the mark!)"² However, he was eventually able to tell Cole of his "success in a contest" which had "risen to bloodheat and nearly to blows",³ and Cole "hurried to the Council Office to tell of his election".⁴ Cole was away on sick leave when Playfair's official connection with the Department ended in October 1858.⁵ "Playfair bade us goodbye yesterday in high spirits", said Redgrave.⁶

Playfair could well have been delighted at leaving what must have seemed to him to have become a less and less desirable post, but his labours had not been entirely in vain. One must query his biographer's claim that he "gave form and substance" to the Science division, while agreeing that "it was not without many a struggle that the Department at last took shape".⁷ In fairness it must be said that his difficulties with the Central School were immense, and there was not, and would not be for some time, an admitted need for instruction in Science. Perhaps Playfair's most important contribution was a negative one. By his failure to initiate schemes for the training of science teachers who, once trained, would have had nothing to teach, he left room and good will for developments after his departure. (He was, of course, in his role as "elder statesman" to do much to influence the demand for such developments in later years, as will be detailed.⁸

iii) The relationships of Cole and Playfair

Playfair seems to have worked well enough with Cole and they continued to meet and to correspond until the latter's death. He introduced "our Departmental system of prizes" into his Edinburgh department,⁹ was always ready to help Cole with news and advice about conditions in Scotland, gave his aid as a Member of Parliament to Cole in his fight to preserve his beloved Museum, and passed on some favourable views of his later pupil¹⁰ the Prince of Wales, to

1 Cole MS Diary 17 June 1858

2 MS letter J.D.Hooker to Huxley 18 June 1858

3 MS letter Playfair to Cole 29 June 1858

4 Cole MS Diary 29 June 1858

5 D.S.A. 6th Report 143

6 MS letter Redgrave to Cole 15 October 1858

7 Wemyss Reid op. cit. 143

8 Chapters III and VII

9 MS letter Playfair to Cole 10 March 1859

10 Playfair gave "lectures on Chemistry in relation to manufactures" to the Prince as part of his father's ill-fated scheme for his education. (Letter to Stockmar 3 September 1859) ed. K. Jagem Letters of the Prince Consort (London Murray 1938) 31

his old friend.¹ He congratulated Cole on his K.C.B. in 1875, saying that "the man who" gave ... Art Manufactures ... such marvellous development ... may well be proud.² He believed that "the public good was uppermost" in Cole's mind, while adding, significantly, that "he was not selfish, but his purposes were frequently misunderstood".³ There was a momentary period of ruffled relationships at the time of the Paris Exhibition in 1855, as will be recorded.⁴ After Playfair left the Department, Cole believed that he was "intriguing to get Huxley and Tyndall to Edinburgh."⁵ (Huxley had written to Playfair at one time and asked him to give him "a lift into an undivided chair"⁶) On the whole, however, their relations were good.

Playfair was not always, perhaps, the efficient organiser he imagined himself to be. "It is a very muddle pated little mortal in reality, though it fancies itself a great man of business", Huxley told his wife in 1862,⁷ when he and Playfair worked together on the Fisheries Commission. One gets the impression of Playfair that he always had an eye for the main chance, and he always seems to have covered his lines of retreat. Perhaps Redgrave's view, that Playfair was never fully involved in the Department's affairs, is a correct one. He must, however, be seen as one of the "founders" of the Department, if only because he was one of the initiatory of "payments on results", as has been recorded, and if he had not been prepared to work with Cole in the Department's early days, the consequences could have been disastrous.

iv) The work of Cole and Redgrave

Cole, too, was generally unhappy in the first years, but he did not carry his frustration to the point of departure, although his attempts at resignation will be detailed. He had felt "de trop ... soon after Science was added to Art", he told Granville, and this was because "the Art Superintendent is the technical adviser ... the Secretary is, or ought to be, the Inspector General" and he expected to be even more superfluous if the impending reorganisation of the Department under the Lord President went through. He urged the abolition of his office "on grounds of public economy".⁸ He enclosed a copy

1 MS letter Playfair to Cole 11 October 1868

2 MS letter Playfair to Cole 25 March 1875

3 Wemyss Reid op. cit. 114

4 Chapter II section (d)

5 Cole MS Diary 5 December 1859

6 MS letter Huxley to Playfair n.d. (late 1854?)

7 MS letter Huxley to his wife 2 September 1862

8 MS letter Cole to Granville 15 September 1855.

of this document in a letter which he sent to Playfair at the time.¹ In the event, Cole and Redgrave stayed, and Playfair departed. The relatively greater success of the Art schemes, because of the greater readiness of the public to accept them, would partly account for this, but it must also be considered that Cole was perhaps more sincere in his avowals of wishing to "help the Prince in his great purpose". One final factor must have been that as a trained chemist, Playfair could find other occupation. As a man without any professional training at all, Cole could not do this, unless the "Paxton offer"² is considered. As it transpired, Cole drove himself into illness: on doctor's orders he left for the Continent with the brothers Samuel and Richard Redgrave in August 1858³ and was thus out of the country when Playfair left the Department for good.

v) Administrative Headquarters

The first headquarters was at Marlborough House, where accommodation was provided as a result of the intervention of the Consort.⁴ It was here that the first Museum was set up, and to this site that the Central Art School was transferred from Somerset House, in 1852. (A "flit" from that building, whose "floors were most unsafe", had been predicted two years before⁵). The purchase of the Kensington site provided opportunities for greater development. The Consort was "anxious to see the plans" in February 1854,⁶ and Cole took up residence in Gore House in the same month.⁷ Tentative approval was given for the transfer in March 1855, and Grey welcomed this as "a step in the right direction".⁸ There was a delay because the Treasury were "stubborn" over building plans: Playfair told Cole, who was in Paris, that both Gladstone and Disraeli had promised support, but that the business would "require very judicious bottle-holding."⁹

The fact that Marlborough House was needed for a separate establishment for the Prince of Wales helped to speed up the move.¹⁰ The erection of the infamous "Boilers" was carried through without the knowledge of the Department, as will be detailed later, but the administrative buildings were ready for the Office, School and Museum to move in 1856. Extra buildings were approved¹¹

1 MS letter Cole to Playfair 30 November 1855

2 Chapter II Section (c)(ii)

3 Cole MS Diary 28 August 1858

4 Ibid. 19 February 1852

5 J. of D. June 1850

6 MS letter Grey to Cole 9 February 1854

7 Cole MS Diary 11 February 1854

8 MS letter Grey to Cole 19 March 1855

9 MS letter Playfair to Cole and Cole MS Diary 12 July 1855.

10 Cole MS Diary 19 January 1856

11 Ibid. 24 October 1856.

after further intervention by the Consort¹. In December 1856, the Consort approved the name of "South Kensington" for the site.² (It was later claimed that this designation had first been used by a sporting group,³ and the area had been variously known as Brompton and Kensington Gore). Cole's method of ensuring that the site would be a permanent one, in his dealings over the Sheepshanks Bequest, will be detailed later.⁴ It was as "South Kensington" that the Department, and its attendant institutions there, would be known for the rest of its career.

c) Political Responsibility

i) Placing at the Board of Trade

The Department of Practical Art, as has been seen, had been placed under the Board of Trade, because of the connection of its work with the encouragement of industrial progress. Playfair favoured the placing of the Science Department "at the Privy Council Office", a suggestion which Cole "controverted",⁵ and this had been the Consort's plan for the placing of both Departments.⁶ The Education Department of the Privy Council, which administered the "grants in aid" which had been given to the voluntary societies since 1833, had, in the eyes of Cole and others, "sectarian" associations.

When Playfair had sent the Consort an account of a meeting of one of the Local Committees set up to raise funds for the Exhibition, the Consort's reply stressed "the great dangers ... if any suspicion or alarm should arise in the mind of the religious world". He feared "the cry ... of Godless instruction" and "the dangers of alarming (them) by any avowed educational scheme" which "might eventually wreck his plan and yours".⁷ It has been suggested that it was on Gladstone's recommendation that the Practical Art Department was placed under the Board of Trade "to diminish the dangers of religious outcry", and Granville regretted this step, but was "prepared to admit that the religious squabble argument is decisive".⁸ How far Cole opposed the placing under the Privy Council because of the "religious squabble", and how far he was against it because he feared interference from the civil service heads of the Education Department, is conjectural. "Perhaps you might not continue under me" said

1 Cole MS Diary 4 October 1856

2 Ibid. 1 December 1856

3 Gwynn and Tuckwell The Life and Letters of Sir Charles Dilke (London Murray 1917) I 17

4 Chapter IX section (c)(i)

5 Cole MS Diary 12 January 1853

6 MS draft of August 1851

7 MS letter Grey to Playfair 18 November 1851

8 Letter of Granville to the Consort, 14 January 1852 (Fay op. cit. 107)

Cardwell, at the time of the formation of the joint Department, but Cole was able to convince him that "the change was not desirable, mixing Science with religion."¹ "The study of God's wisdom is unlikely to subvert God's truth", Playfair argued,² but the placing of the joint Department under the Board of Trade was a temporary victory for those who feared controversy.

ii) Political chiefs and their influence

The initial relations between officials and their political chief, Cardwell, seem to have been amicable. He wished Cole "to consider him quite ignorant of the Department" which he saw "as a novelty arising out of the Great Exhibition"³ and told Cole that he was "a great necromancer".⁴ Within a few months, however, Cardwell, in displaying the concern for economy which was to be the keynote of his later career and his later successes, thought that "we are running into extravagance".⁵ While he could dismiss a Treasury report as "waste paper and concerned with salaries for clerks",⁶ he wanted to be kept fully informed "as to what is being set afoot by others", although he was willing "to give the time requested to my industrial training, not liking to administer a system while I do not fully comprehend it".⁷ "Much put out," Cole confided to his Diary, on Cardwell's reaction to the news that Cole had arranged to address a meeting of provincial Mayors at the Mansion House in early June 1853,⁸ which would "discuss the ... facilities for popular cultivation of Science and Art".⁹ The politician later "objected strongly to the Lord Mayor's interference".¹⁰ While "the Conference went very well",¹¹ Cardwell was soon enquiring "if the Department might not be reduced".¹² "The recommendation to have two Secretaries reduced to one" was doubted by Trevelyan of the Treasury,¹³ but Cole wrote to his chief and offered to resign, saying that he was "working fifteen hours a day and only just keeping the machine going" and had been "working hand to mouth for fifteen months".¹⁴ (Redgrave agreed that the letter was "very necessary" and said "I have been grinding my body and soul (during) fifteen months of worry".¹⁵ Cardwell was "not

1 Cole MS Diary 9 January 1853

2 Address of 25 October 1853 at the People's College, Sheffield (London and Chappin and Hall 1853)

3 Cole MS Diary 8 January 1853

4 Ibid. 28 January 1853

5 MS letter Cole to Northcote 9 May 1853

6 Cole MS Diary 28 May 1853

7 MS letter Cardwell to Cole 3 June 1853

8 Cole MS Diary 2 June 1853

9 Ath. 11 June 1853

10 Cole MS Diary 4 June 1853

11 Ibid. 5 June 1853

12 Ibid. 16 June 1853

13 Ibid. 16 June 1853

14 MS letter Cole to Cardwell 18 June 1853

15 MS letter Redgrave to Cole 18 June 1853

sufficiently alive to settling the organisation", Cole felt, and was "too much pressed by other work". Cole hinted that he had had other offers,¹ and might leave the Department.²

One cause of friction was hinted at by Grey when he said that Cardwell was, possibly, irritated because he thought that Cole was the Consort's servant and was attempting to usurp authority.³ The fact that Cole was "uneasy about the Office" was known to his chief, he believed.⁴ Cardwell was "unfit to be a statesman if he did not have confidence in people", Trevelyan thought.⁵ At a meeting at the Treasury, Cardwell, "declined to say anything at all" which caused Cole to record that "I never saw such a case of official conduct in a Minister". Later that day, after Cardwell had received a deputation from the Manchester School of Art, he "vowed to look into the Department after Parliament ... was open to cancel its proceedings" and asserted that "it would be a great success or failure".⁶

Playfair, too, felt that he was "a mere clerk who had been unable to inspire his Minister with any confidence", and resented Cardwell's dealings with de la Beche⁷ "over my head".⁸ Even the mild-mannered Redgrave believed that it was better to put his views on paper "because of the hurry necessary to Mr. Cardwell's duties at present".⁹ The officials were "not being crotchety" about their difficulties, Granville told Playfair at this time.¹⁰ A reconciliation took place. "Mr. Cardwell came, and we had a pretty full and frank explanation", Cole noted. After Cole said that he felt he did not have his chief's confidence, and would prefer to retire, Cardwell "promised everything to make the Department a success".¹¹ "If I had not succeeded, there would have been no Department", Cardwell asserted.¹² Cardwell's manner had been cordial, Cole told Playfair, and "he entirely agreed to the principles I held as to the management", he recorded hopefully.¹³ "It is by self support that the scheme must be tested and must stand or fall", said Cardwell later in the year, in congratulating Cole "on the success of the schemes to date".¹⁴

1 Paxton offered him the post of Manager of the newly transferred Crystal Palace at a salary of £2500. (Cole MS Diary 13 July 1853)

2 MS letter Cole to Grey 13 June 1853

3 Cole MS Diary 4 July 1853

4 Ibid. 16 July 1853

5 Ibid. 16 July 1853

6 Ibid. 20 July 1853

7 Chapter VII section (a)(iii)

8 MS letter Playfair to Phipps 18 July 1853

9 MS letter Redgrave to Cole 20 July 1853

10 MS letter Playfair to Cole 19 July 1853

11 Cole MS Diary 23 July 1853.

12 MS notes by Cole 23 July 1853

13 MS letter Cole to Playfair 23 July 1853

14 MS letter Cardwell to Cole 13 October 1853

In early 1854, however, relations deteriorated again. "As soon as we got into discussing principles, Mr. Cardwell began to look at his watch ... little or no progress made",¹ Cole noted. He told Grey that he was "a powerless clerk" whose duties did not warrant his salary,² yet he noted that Cardwell believed "that the Department gave him great pleasure he thought we were being very successful".³ "Mr. Cardwell says that the Department is engraved on his heart",⁴ recorded Cole, as relations approached their worst point. Cardwell stressed his Parliamentary responsibility,⁵ and told the Commons that once instruction had been "consolidated", one of the Secretaryships would become vacant.⁶ A "remonstrance" by de la Beche⁷ on what he saw as "interference" with his School seems to have been the last straw. Macleod said that he was encouraged by Cardwell to pass on information behind Cole's back.⁸ Both Secretaries now prepared to resign.

"The highly paid office which I hold is a needless cost to the public; ... according to the mode in which you conduct the Department" said Cole and he submitted his resignation.⁹ Playfair, not knowing of this, asked Cole not to resign without prior consultation.¹⁰ A month later Playfair too sent in his resignation, listing as his grievances Cardwell's Commons speech, the de la Beche "remonstrance", and "the hopelessness of progress in Science".¹¹ There are no Diary entries or references in correspondence to record Cardwell's reactions, but the resignations were obviously not accepted. "Science was a failure and Art had been organised by his predecessor, Henley", Cardwell seems to have believed.¹² He still refused to define the Secretaries' responsibilities and insisted that all questions on these matters must be referred to him.¹³ Redgrave tried to act as peacemaker. Playfair was "bowed out of the room" while the Art Superintendent had a long discussion with the President.¹⁴ Redgrave told Cole that he had given Cardwell "a full account of the problems"

1 Cole MS Diary 10 January 1854

2 MS letter Cole to Grey n.d. 1854

3 Cole MS Diary 21 January 1854

4 Ibid. 9 May 1854

5 Ibid. 30 May 1854

6 Hd. CXXXIV (1854) 1004

7 Cole MS Diary 1 July 1854 and Chapter VII section (a)(iii)

8 Ibid. 3 July 1854

9 MS letter Cole to Cardwell 5 July 1854. (In a MS letter of the same date to Redgrave, Cole said that he had gone to Cardwell to give him the letter, but the President had been so complimentary over the Paris Exhibition that he had posted it instead).

10 MS letter Playfair to Cole 8 July 1854

11 Cole MS Diary 4 August 1854

12 Ibid. 16 November 1854

13 Ibid. 20 November 1854

14 MS letter Playfair to Cole 2 December 1854

and hoped "for better things".¹ Cole was not mollified. He repeated his offer of resignation² to be taxed by Cardwell that his letter was a "hasty one" and that he "had not complained previously".³ When Cole charged the President with a speech, unfortunately unspecified, in which he had said that Cole and Redgrave "knew naught of manufactures", he gave Cardwell copies of the Journal of Design, which elicited the admission that "the older he grew, the more he had to learn".⁴

Cole spent the Christmas holiday "wording a memoranda of complaints".⁵ When he coyly suggested to Grey that he was once again considering the Crystal Palace offer,⁶ he was told bluntly that he must be his own judge of what was best for his career.⁷ Cole's Diary for 1855 has not survived, and correspondence gives no information, so that the progress of events leading up to the rearrangement of responsibilities of Playfair and Cole must remain obscure, but this new system must have gone much of the way to heal the breaches. It is perhaps significant that Cole had no further correspondence with Cardwell after he left office with the fall of the Aberdeen Coalition in February 1855. They were sufficiently reconciled in the following year for Cole to "dine at Mr. Cardwell's. Saw himself as the Saviour of the Department ... saw things in light of experience (and) ... had altered views".⁸ Playfair was invited to a meeting at Wigan at which Cardwell was to preside "just as your labours with the Department come to an end".⁹

The newly formed Department was but one of several important concerns under the political Head of the Board of Trade. One cause of friction between Cardwell and his officials would seem to have been a dispute on basic functions. "He seems not to see that the Department as managerial is quite separate ... from Marlborough House as a School of Art, Jermyn Street as a School of Science ... managing Art, Science, Museums, Surveys, Dublin and so on", reported Redgrave to Cole,¹⁰ and he does not seem to have understood fully the principles of "self support".¹¹ The truth may well have been that Cardwell was loth to add

1 MS letter Redgrave to Cole 3 December 1854
 2 MS letter Cole to Cardwell 7 December 1854
 3 Cole MS Diary 13 December 1854
 4 Ibid. 19 December 1854
 5 Ibid. 24-27 December 1854
 6 MS letter Cole to Grey 6 January 1855
 7 MS letter Grey to Cole 8 January 1855
 8 Cole MS Diary 18 July 1856
 9 MS letter Cardwell to Playfair 14 October 1858
 10 MS letter Redgrave to Cole 20 July 1853
 11 Cole MS Diary 23 July 1853 and MS letters Cardwell to Cole 9 and 13 November 1853.

to responsibilities which he could not find the time to administer thoroughly, or to assent to developments which could have led to unpredictable expenditure. In addition, he might well have shared the fears of the Court often evinced by the Whig members¹ of the Coalition he had joined; he was dealing with not one, but two Secretaries who had relied largely on the patronage of that Court for their advancement.² (Playfair was appointed Gentleman Usher to the Consort on the conclusion of the Exhibition³ and held the office until he resigned on his appointment to Edinburgh.⁴)

The officials found Lord Stanley of Alderney, who succeeded Cardwell, much more amenable, although he rejoiced in the nick-name of "Benjamin Backbite" in some circles.⁵ Relations were perhaps better because Cole followed the Consort's advice to "keep Stanley informed".⁶ He raised no objection to the move to Kensington⁷ and complimented Cole on getting "abstracts of the results of free trade" published in The Moniteur,⁸ assuming that he had been able to influence Napoleon III.⁹ Redgrave "liked him much in business".¹⁰ He could be firm. He refused to alter payments on teachers' certificates because he saw this action as "a breach of faith".¹¹ He believed "Marlborough House" had "few friends"¹² and told Cole that unless he was watched, he "would spend the national revenue on it".¹³

iii) The transfer to the "Privy Council"

From its inception, Granville had argued that the Department should be placed under the Privy Council.¹⁴ In the middle of the first period of trouble with Cardwell, Granville returned to the topic, and said that he would speak about it to Aberdeen, the Premier, and Gladstone.¹⁵ He raised the question again when relations were at their worst, and wrote to Cole¹⁶ to say that the Department would be "better under Johnny".¹⁷ When Granville spoke at

1 Chapter XIII section (b)(ii)

2 Chapter IV (section (j)(ii)

3 MS letter Prince Consort to Playfair 18 October 1851

4 MS letter Grey to Playfair 10 January 1859

5 D.N.B.

6 MS letter Grey to Cole 12 December 1856

7 MS letter Cole to Grey 19 March 1855

8 MS letter Stanley to Cole 25 July 1855

9 Cowley, the Ambassador, arranged an interview for Cole at the Tuileries.
(MS letter Cowley to Cole n.d. May 1855)

10 MS letters Redgrave to Cole undated and 22 July 1855

11 MS letter Playfair to Cole 7 July 1855

12 MS letter Redgrave to Cole 16 July 1855

13 Cole MS Diary 5 May 1855

14 Ibid. 28 December 1852

15 Ibid. 12 July 1853

16 Ibid. 10 June 1854 and MS letter Granville to Cole 3 August 1854

17 Lord John Russell had succeeded Granville as Lord President of the Council.

Wolverhampton in that year, he made a point of his belief that "the difficulties of the religious question do not touch Schools and Museums of Art and Science".¹ As Lord President once more, he wrote to tell Cole that "if you come under me, ... (I will) ... weigh carefully your statement."² In a further letter, Cole outlined his suggestions for better organisation.³ Granville fostered a scheme for the appointment of a "Vice President of the Council" who would have special responsibility for Education, with the two Departments under his control. The passage of his Bill through both Houses was marked not by any objections to the transfer of the Department from the Board of Trade, but by disagreement on the need for such a Minister at all.⁴ Granville was sure that "the Departments would be united whether his Bill became law or not".⁵

The Order in Council which did "unite" the Departments referred to a recommendation from "The Lords in Council" that the Department "should be under the Direction of the Education Department", but, in fact, it was specifically stated that both would carry on their duties "under existing regulations", and it was seen that the union would be one of political control rather than of administrative merger.⁶ When the Department was "made one with the Committee of Council",⁷ there was much discussion with the Education Department on the division of functions.⁸ (When negotiations reached a successful conclusion Playfair assumed, nineteen years too soon, that Cole was "off to Windsor to be made Sir Henry")⁹ Cole saw the Department as the "secondary branch"¹⁰, and the terms "primary" and "secondary" were in fact used, the former for "general education under the Education Department" and the latter for "industrial education ... the responsibility of the Department of Science and Art".¹¹ As will be noted later, there was rarely any agreed policy between the two Departments, but the political responsibility decided upon in 1856 was to remain for the remainder of their independent, although theoretically joint, careers.

1 Ath. 12 August 1854

2 MS letter Granville to Cole 19 February 1855

3 MS letter Cole to Granville 15 September 1855

4 Hd. CXL (1856) 814-828, CXLI (1856) 212 and CXLII (1856) 35

5 Cole MS Diary 24 January 1856

6 D.S.A. 3rd Report 3-4 and BP. (1856) XVI (533)

7 Cole MS Diary 3 March 1856

8 Ibid. 31 March, 4, 15, 16 December 1856

9 Ibid. 29 December 1856

10 Ibid. 17 December 1856

11 D.S.A. 4th Report xxvii and 5th Report 5

The effective date of transfer to the Department was February 1857.¹ The officials can have expected few difficulties, and met none, with Granville. Cole lost no time in discussing estimates with W.F. Cowper,² the "future Vice President" and obtained a half promise of an increase.³ "Lord G. and Mr. C. seemed disposed to leave details to us", Cole noted.⁴ They agreed to "drop Committee of Council from the address"⁵, promised support for increased building grants⁶ and aided Cole in his campaign for an official residence in the Museum.⁷ This first period of "Education" partnership between Cole and Granville lasted for just over a year, and was renewed again after a short break of sixteen months.

The actual point in time of the formation of the Department could not have been better chosen. It was fortunate that the Department was inaugurated before the inception of heavy war taxation with the outbreak of the Crimean War in March 1854, Playfair believed.⁸ Cole hoped that "plans will not be forgotten" if the war, which was looming, broke out,⁹ and Playfair was later told that an increase vote for the Museum would be refused because of "Dizzy's war economy policy".¹⁰

Apart from day to day business, there were regular meetings of a "Board", which consisted of the political chiefs, the President and Vice President of the Board of Trade, and their successors, the Lord President and Vice President of the Council, together with their chief officials, while it ceased to meet frequently in later years, it appears to have been the chief occasion for the inter-change of ideas and the issue of orders on policy, for most of the period.

iv) The end of the "partnership" with the Commissioners

The official association of the Royal Commissioners of the 1851 Exhibition with the Department lasted for only five years. As early as 1853 Cole had to tell the Consort that he believed that the public had "no sympathy with the scheme, but rather the reverse".¹¹ In 1856, a Bill for the transfer of the National Gallery to South Kensington aroused particular opposition which

1 D.S.A. 5th Report 5

2 Biographical appendix

3 Cole MS Diary 24 January 1857

4 Ibid. 21 February 1857

5 Ibid. 24 June 1857

6 Ibid. 28 August 1857

7 MS letter Cole to Granville 16 March 1857

8 Wemyss Reid op. cit. 159

9 MS letter Cole to Grey 12 January 1854

10 MS letter W.F. Cowper to Playfair 11 August 1857

11 MS letter Cole to Phipps 6 September 1853

was eventually to end the partnership. The Bill was withdrawn¹ after a long debate at the end of which Lord Elcho proposed the appointment of a Royal Commission.² The Commissioners decided by three votes to one, with one abstention, to retain the Trafalgar Square site,³ and no more was heard of the scheme. Punch published a cartoon which showed Mr. Punch saying to the Consort, outside the National Gallery, "Suppose you leave them where they are," and referred in "Condolence with a person at Court" to

"The stubborn, perverse, disagreeable crew

That outvoted the Court and the Government too".⁴

An exchange of letters summed up the position. "The partnership of the Commissioners and the Government" meant that public sympathy was lacking, said Cole, and he believed that it would be "a very long time ... before the government votes the two or three millions for suitable buildings".⁵ (It took the rest of the century). The Consort, through Phipps, believed that progress was being made, and referred to the fact that "the House of Commons has never forgotten the Prince's victory of the Great Exhibition".⁶ The dissolution of the partnership actually took place in 1858.⁷ Cole maintained his relationships with the Commissioners for the rest of his career. Their continuing concern for "scheme to aid Science and Art" is detailed later in this work.⁸

d) Institutions and Instruments

The Department was "the consolidation of institutions rather than the creation of any new ones", Cole claimed. He refuted charges that "Parliament had suddenly and largely increased the votes for Science and Art"; the cost to the state of individual bodies had been £40,000 per annum, and he argued that the "new" figure of £73,000 in 1856, with greatly extended duties, represented no great increase in expenditure.⁹ In addition to the existing Central School and the provincial Schools of Design, the Geology Survey, with its Museum and School of Mines, and Mining Record Office, were taken over. The Record Office,

1 Hd. CXLIII (1856) 156

2 Hd. CXLII (1856) 2097-2154

3 P.P. (1857) XXIV (1) vi

4 Pch. 12 July 1856

5 MS letter Cole to Grey n.d. August 1856

6 MS letter Phipps to Cole 18 August 1856

7 MS letter Grey to Cole 9 December 1858

8 Chapter XVII section (A)(e)

9 Address on the functions of the Science and Art Department 16 November 1857

an appendage of the Survey, had been established in 1840.¹ (It was transferred to the Home Office in 1883.²) The Survey's addition to the Department was never more than a technical one. (It was fondly hoped that changes for it would eventually cease when students took over fully its work in the field.³) While its Report was published annually in the Department's Report, and the Vice President answered questions raised in the Commons on its activities, it remained the sole concern of its Director throughout the period, and only one ill-advised attempt to enter into its control was made by the Department's officials in the matter of "Diaries", which will be recorded.⁴ Its School and Museum were, however, most important instruments in the Department's schemes. Transferred to the Department in its first year of operations were the functions, mainly the Museums, of the Royal Dublin Society and the Museum of Irish Industry.⁵

Cole, in particular, was always ready to extend the Department's commitments on any occasion when it seemed that an institution of "Science" or "Art", in the widest sense, could be taken over. Thus, the Department also assumed responsibility in its first year for the Record of Designs Office, an institution for which Cole had campaigned in his Journal of Design, and which, as part of the Registry of Designs, had formed part of the Patent Office.⁶ The Department was also responsible for a Meteorological Enquiry carried out by the Board of Trade. (When daily weather forecasts were predicted as a result of the enquiry, there were roars of laughter from an incredulous House.⁷) It was in actual fact involved in little more than the issue of equipment to merchant ships, and the collection of records.⁸

The Department's major instruments were the central and provincial institutions, including its Museums, and the developments in these fields are separately recounted below.⁹ One "temporary" type of project which it would encourage was the Exhibition, and the first of these with which it was connected was the Paris Exhibition in 1855. The French had reversed their decision of 1849, after the success of the Great Exhibition, and had decided to make their next Exhibition truly an international one. "Our Department to

1 D.S.A. 1st Report lxi
 2 D.S.A. 31st Report xx
 3 D.S.A. 1st Report Appx. "A"
 4 Chapter III (Section b)(i)
 5 D.S.A. 1st Report lxi
 6 D.S.A. 1st Report 282
 7 Hd. CXXXIV (1854) 1006
 8 D.S.A. 2nd Report xliiv
 9 Chapters VI-IX

work the Paris Exhibition", noted Cole¹, and he pressed on with the organisation of the British entries, spending much of his time in Paris, despite a caveat from Playfair that "the public would think we had nothing to do in the Department".² The transport and safekeeping of works of Art caused untold worry to Redgrave, as correspondence reveals. The Exhibition also threatened to spoil good relations between Cole and Playfair. Cole seems to have believed that there was a plot to replace him in Paris. Playfair disclaimed this, but thought it would be better if Cole were at home to "deal with provincial agitation".³ Cole denied any "differences between us".⁴ Playfair later hinted that he would be extremely annoyed if he did not receive a French decoration.⁵ (Cole received an addition of £200 to his salary for two years and £500 for his expenses during the period.⁶) The relatively unsatisfactory results of the Department's administrative connections with this first Exhibition would continue in its relations with others through the century.

e) Relations with the Education Department

On its formation, the Department had to work with this sister Department which had already been in existence for twenty years. Ralph Lingen⁷, its Civil Service Head, was initially ready to co-operate in schemes, but stressed that there should be "clear understanding of functions".⁸ The general details of the Department's Art schemes were circulated to H.M.I.'s, and a new regulation of the Education Department made it a condition of grants to Training Schools that their students should become "proficient in drawing".⁹ The H.M.I.'s agreed that inspection in these spheres "would be better organised by the Board of Trade", or that "an officer should be delegated to assist the H.M.I.'s".¹⁰ Lingen first agreed that his Department should appoint the Inspector¹¹ but later thought that the Department should in fact appoint the officer, and he offered to "hook into your machinery".¹² Treasury approval was long in coming, Lingen told Cole.¹³ Meetings between officials, and correspondence with the Treasury,¹⁴ ended with the appointment of Captain Owen, R.E., as "Inspector for

1 Cole MS Diary 11 February 1854

2 Ibid. 16 April 1854

3 MS letter Playfair to Cole 1 May 1855

4 MS letter Cole to Playfair 30 November 1855

5 MS letter Playfair to Cole 17 November 1855

6 MS.M 6.104

7 Biographical Appendix

8 MS letter Lingen to Cole 2 July 1852

9 D.P.A. 1st Report 78-80 and 345

10 Ibid. 80

11 Cole MS Diary 22 October 1852

12 MS letter Lingen to Cole 28 October 1852

13 Cole MS Diary 23 May and 11 June 1853

14 Ibid. 21 June 1853 and MS letter Lingen to Cole 2 July 1853.

the general purposes of the Department, and Inspector in Drawing in connection with the Committee of Council on Education", in July 1853.¹ The Department assumed full responsibility for drawing examinations in the Training Schools.²

Pupil teachers were encouraged to become proficient in drawing, and prizes were awarded on the results of their annual examinations.³ It was initially agreed that the Department should pay the teachers of these successful pupils for their proficiency in drawing,⁴ but this remained an Education Department responsibility, after discussion.⁵ "It is in our interest that the school-master should be induced to supervise and keep them at it", advised Redgrave, when a problem arose over payments to teachers whose pupils had attended Schools of Art. "We cannot go into the question of who taught them", he added wisely.⁶

There appear to have been many meetings and discussions between officials at the period when the Department was being transferred to the Lord President.⁷ This ended with the "logical division between primary and secondary" to which reference has been made. When the transfer was completed, Cole argued that it had "enabled the Lord President and Vice President to render the working of any points of contact ... harmonious and consistent".⁸ (The Department assisted in the promotion of general education by setting up the Education collection and Library at South Kensington, and among the public lectures given there in 1857 was one on "reading aloud".⁹) "Harmony and consistency" had already been threatened, however, by an unwillingness on the part of the Education Department to assist in schemes for science teaching and this problem was never solved during the period of separate existence. Lingen first wanted "his" Inspectors to "examine Science in Training Colleges"¹⁰ He then changed his mind and "thought there should always be superior teacher in larger schools",¹¹ and gave "agreement on examinations rewarding schools".¹² "We are not to examine pupils in the (Norwich) Training School but leave to the Queen's Inspector", Redgrave told Cole, however, later in 1856¹³, and he added

1 D.S.A. 1st Report 345 and MS.M 1.253

2 D.S.A. 1st Report 345 and MS.M. 2.74

3 Cole MS Diary 27 August 1853 and D.S.A. 1st Report 345

4 Cole MS Diary 23 and 26 January 1854

5 D.S.A. 1st Report xxii

6 MS letter Redgrave to Cole 7 August 1857

7 Cole MS Diary 27 November 1856, 13 and 31 March, 24 June, 7 July, 4 and 28 August 1857.

8 Cole Address of November 1857

9 D.S.A. 4th Report 281

10 MS letter Redgrave to Cole 23 May 1855

11 Cole MS Diary 15 February 1856

12 Ibid. 27 May 1856

13 MS letter Redgrave to Cole 10 November 1856.

the following year "Education Inspectors object to a Department examination unless they take (presumably, set) the paper".¹ The outcome was that Cole was told by Granville that the Reverend Benjamin Cowie, one of the few H.M.I.'s with a "science qualification" (he was a mathematician) "would inspect male training schools".² This problem of responsibility reached serious proportions in the next decade and affected the whole development of "secondary" education, as will be recorded. While Cole noted, early in 1857, "First Education Board. Details to us",³ the Departments actually proceeded on their separate ways after the transfer of political responsibility: although officials met to discuss matters of mutual interest⁴ there was never any unified policy.

f) Summary of the period

At the time of Playfair's departure, the foundations on which the Department was to develop had been laid. The principles of self-support had been established. The regulations for control of the provincial Schools, with the financial inducements for their co-operation in what the Department saw as progress, had been firmly formulated. The machinery for inspection had been constructed and inaugurated. The Central Institutions, particularly those for the encouragement of Art, had begun to take shape. The administrative Headquarters had been established at South Kensington. There had been a very great increase in the numbers of provincial Schools of Art. The system of payments on results had been initiated. The elementary schools had been associated with the Department's work. Masters to teach in the Schools were being trained, and increasing numbers of children and teachers from the elementary schools were going on to work in the Schools of Art.

While much less had been achieved in Science, payments on results had begun there too, and a skeletal foundation had been laid for future developments. The Department was under the political control of the Lord President of the Council, where it would remain. Opposition to the Department was developing, particularly in the field of Art, and this would become even more pronounced in the next decade. Most important for the future development of the Department, Cole and Redgrave were now firmly in control, and the next period was to see Cole, particularly, in command.

1 MS letter Redgrave to Cole 7 August 1857

2 Cole MS Diary 9 January 1858

3 Ibid. 21 February 1857

4 Cole MS Diary 28 February, 6 April, 27 May 1858, 5 August 1859 and MS letter Lingen to Cole 27 May 1858.

CHAPTER THREE

PAYMENT ON RESULTS : PRINCIPLES AND PRACTICE
(1858 - 1873)

- a) The chief officials and their policies
 - i) The Cole regime
 - ii) The heir apparent
 - iii) Cole's resignation
 - iv) The question of the succession
- b) Institutions and Instruments, and areas of responsibility
 - i) New foundations and old quarrels
 - ii) The International Exhibition of 1862
 - iii) The Paris Exhibition of 1867
 - iv) Other developments
- c) The development of facilities in the teaching of Art
 - i) General features
 - ii) The introduction of the full scheme of payments on results in Art
 - iii) Reactions and results
- d) The development of facilities in the teaching of Science
 - i) The initiation of the scheme of 1859
 - ii) The development of the system of payments on results in Science
 - iii) New demands and solutions
- e) The Technical Instruction movement and its effects
 - i) The Paris Exhibition
 - ii) Committee and Commission
 - iii) Technological examinations
- f) The influence on Department policy of political chiefs
- g) Relations with the Education Department
 - i) Lack of co-operation in science teaching schemes
 - ii) An extension of "payment on results"
 - iii) Personal relations
 - iv) The Education Act of 1870
 - v) An attempted merger
- h) Summary of the period

a) The chief officials and their policies

i) The Cole regime

The departure of Playfair in October 1858 left Cole, in effect, in sole command, with the title of General Superintendent and Secretary. He set about consolidating the Museums and the system of Art teaching with the aid of Cunliffe Owen¹ and J.C. Robinson,¹ for the former and with the assistance of Redgrave and H.A. Bowler, for the latter. He proceeded to develop a system of science teaching, initially under pressure from his political chiefs. The fact that he possessed no scientific qualifications would appear to have worried him as little as did his lack of formal training in Art. He used the technical expertise of two officers of the Royal Engineers, Francis Fowke¹ and John Donnelly,¹ who were assisted by J.C. Buckmaster¹ as "Organising Master" and later by John F. Iselin,¹ Norman Macleod¹ was the administrative head under Cole, with the title of Assistant Secretary, which he had first been granted in 1857.² These men were to form the team which, with minor additions and with withdrawals due to death or retirement, was to be responsible for the Department for the rest of its existence. Cole knew how to choose his men.³

Cole lost no time in informing his political chief, the Marquis of Salisbury, that Playfair's duties had been "greatly experimental", when the chemist was in the process of resigning, and asked for "the duties of his successor to be very carefully considered".⁴ He was able to secure the appointment⁵ of Captain Ryder to exercise responsibility for Navigation Schools, arguing for a "nautical man" against an un-named clergyman who was supported by Lingen.⁶ A complete reconstitution of Playfair's post was, however, firmly opposed by Cole and Redgrave. They were prepared to support the claims of Fowke, who had joined as an Inspector in 1856, to be "Chief Inspector of Science", but were against his promotion to the post of "Inspector General ... as it came to Playfair over again".⁷ Fowke appears to have been in favour with Salisbury, and presented him with a scheme for science teaching,⁸ but, no doubt well briefed by Cole, Redgrave got him to "agree entirely about

1 Biographical Appendix

2 MS.M 7.16

3 MS letter Hofmann to Cole 20 December 1865 ("Friends and not friends agree that you know how to find men")

4 MS letter Cole to Salisbury 31 May 1858

5 Cole MS Diary 13 August and 29 December 1858

6 MS letter Redgrave to Cole 7 October 1858

7 MS letter Redgrave to Cole 15 January 1859

8 MS letter Redgrave to Cole 20 January 1859

the Inspector-Generalship.¹ Fowke got his promotion in another way, as "Engineer and Architect" from 1861, coupling these duties for a year with those of inspection. Donnelly, while still on the active list of his Corps, undertook some of Playfair's duties,² and after his secondment, he became the "Inspector for Science" in 1862, when Fowke gave all his time to his architectural duties.

ii) The heir apparent

When Donnelly, after service in the Crimea, came to Kensington with a detachment of Sappers in the Spring of 1857 to assist in clearing the site,³ he was 24, Cole was 50, Macleod 46, and Fowke 35. Cole seems to have seen the younger man almost as a son. Cole would appear to have met Macleod on social terms on only two occasions, once when he stayed at his home and recorded that he had "much of the Scottish clanship about him"⁴ and on another occasion eleven years later when he visited him when the Scot was ill with rheumatism.⁵ Donnelly's name occurs frequently in Cole's Diaries: he dined with the Coles, stayed with them in the country and accompanied his chief on his only recorded visit to the Derby.⁶

This preference for Donnelly was bound up with Cole's liking for members of his Corps, whose experience particularly suited them for work in a "scientific" Department. (Macleod, too, was an Engineer, but in a volunteer corps.) "The bringing forward of R.E.'s" caused Macleod concern as early as 1860,⁷ but it was not until four years later that Redgrave warned Cole of general dissatisfaction.⁸ Granville noticed that Macleod was "looking glum" in 1865,⁹ and the Scot was prepared to retire on pension¹⁰ when a Treasury Commission recommended the abolition of his office.¹¹ Cole seems to have had a low opinion of Macleod's administrative abilities.¹² He discussed a change of offices between Macleod and Donnelly with the Engineer¹³, who was thinking of re-joining the Colours¹⁴, but, not surprisingly, got nowhere with Macleod, who was "much offended and would not give way to Donnelly".¹⁵ The rivalry between the two came to a head as Cole's retirement date drew nearer.

1 MS letter Redgrave to Cole 27 January 1859

2 MS.M 13.31

3 Ibid. and MS.M 8.185

4 Cole MS Diary 18 December 1854

5 Ibid. 13 October 1865

6 Ibid. 4 June 1862

7 Ibid. 30 January 1860

8 Ibid. 27 December 1864

9 Ibid. 22 July 1865

10 Ibid. 28 October 1865

11 Ibid. 13 October 1865 and Treasury letter 30 August 1865 (Treasury out letters 23. 248)

12 Biographical Appendix

13 Cole MS Diary 24 January 1869

14 Ibid. 29 April and 18 May 1869

15 Ibid. 19 May 1869.



J. Donnelly

Sir John Donnelly
(aet. 54)
(Science and Art Magazine)
(March 1888)

iii) Cole's resignation

"Age 56: though not ailing, beginning sensibly to wear out", Cole recorded at the end of 1864¹ Redgrave, who had never initially contemplated so much responsibility, and always hankered after his "full-time profession of Artist"², made several attempts to resign, but could not get satisfaction on his pension.³ He envied Cole's "inexhaustible spirits":⁴ although he was the older and it would seem the more tired man, his service actually extended beyond Cole's.⁵ In October 1870 Cole told his political chiefs that he was ready to retire, not because, at 62, he was tired, but because he wished to take up a full-time post as Organiser of International Exhibitions.⁶ A clear statement from Ripon,⁷ the Lord President, that if he undertook the organisation of the 1872 Exhibition he would draw no pay from the Department, was one factor which delayed Cole's resignation:⁸ A more important reason was the "Simkins case".

Anthony Lacom Simkins was appointed Financial Officer to the Department in June 1856, and had to find security of £300.⁹ He was "dissatisfied at his low payment" in 1860,¹⁰ the Audit Office complained of his accounts in 1867,¹¹ and Cole later described him as "the least efficient of the officers".¹² After Cole had officially been appointed Accountant by a Treasury letter¹³, he "saw Macleod about Simkins' balance"¹⁴, and unsuccessfully tried to have Simkins transferred to the Education Department".¹⁵ There was obviously some concern in Cole's mind, and he should certainly have gone into Simkins' affairs more closely than he appears to have done. Simkins "promised to write and to engage to clear off his advances" in June 1870¹⁶, but a year later Forster

1 Cole MS Diary 30 December 1864

2 MS letter Redgrave to Cole 5 December 1864

3 Cole MS Diary 14 October 1865, MS letter Redgrave to Cole 29 July 1867, and MS memorandum on his pension claims, Redgrave to Cole 1 December 1871.

4 MS letter Redgrave to Cole 29 August 1868

5 D.S.A. 23rd Report xi

6 Cole MS Diary 4 and 26 October 1870

7 Biographical Appendix

8 MS note by Cole on a meeting with Ripon 24 January 1872

9 MS.M 6.1

10 Cole MS Diary 27 December 1860

11 Ibid. 14 November 1867

12 Hd. CCXIII (1872) 400 (Forster)

13 MS letter Lowe to Cole 6 February 1868

14 Cole MS Diary 25 May 1869

15 Ibid. 6 July 1869

16 Ibid. 1 June 1870

noted that he "looked suspicious about receipts."¹ The following day, Macleod brought Cole proof of the embezzlement of £6,400 from wages and Museum receipts. Simkins fled and Forster "thought the police should find him."² Simkins had, in fact, embezzled a total of £7,704, of which £1,137 was recovered.³ So far as can be ascertained he disappeared without trace and was never brought to trial. (There are no references to any proceedings in The Times to 1880).

The Treasury argued that this was the Department's responsibility,⁴ and a Treasury letter deposed Cole as Accountant,⁵ which brought Donnelly's sympathy and his belief that it was the Audit Office which had erred.⁶ Cole was well supported by his political chiefs. Ripon promised "all in my power to prevent injustice",⁷ and Forster, in putting full blame on the Treasury, showed Cole a confidential letter by Ripon on the subject. While Cole on this occasion could claim that "like Mark Tapley, I felt jolly about it",⁸ he feared that Lowe "would use the occasion as a chance to be spiteful on pension".⁹ (The Treasury were correct in imputing negligence, Lowe told Forster).¹⁰ A Select Committee was set up by the Commons. Cole was examined on three occasions, on the first for four hours,¹¹ and thought that Macleod "showed ignorance of our printed accounts".¹² Forster defended Cole, saying that he "was not responsible for vouchers and balances".^{13A} The final Report would appear to have exonerated the Department.^{13B} It is difficult to say just how suspicious Cole was of Simkins before the astonishing extent of his embezzlement was revealed. (His private actions often belied his public image. While a Junior Clerk, Belshaw, "admitted dishonesty",¹⁴ he was allowed to continue in the service, and eventually retired as Chief Clerk). The case cannot have helped to improve the Department's "image". The total sum of the defalcations was written off by yearly amounts,¹⁵ and was finally wiped out by 1881.¹⁶

1 Cole MS Diary 5 June 1871

2 Ibid. 6 June 1871

3 Hd. CCXIII (1872) 400

4 Cole MS Diary 19 December 1871

5 Ibid. 5 December 1871

6 Ibid. 19 December 1871

7 MS letter Ripon to Cole 4 January 1872

8 Cole MS Diary 6 January 1872

9 MS notes by Cole on a meeting with Ripon 24 January 1872

10 Cole MS Diary 16 January 1872

11 Ibid. 24 April and 6 May 1872

12 Ibid. 15 May 1872

13A Ibid. 24 April 1872 and Hd. CCXIII (1872) 399-402 13B P.P. (1872)VII(1)

14 Cole MS Diary 17 February 1858

15 Hd. CCLIV (1880) 2045

16 Hd. CCLXIV (1881) 1333.

With the affair out of the way, Cole could return to a consideration of his retirement, which it had seriously impeded.¹ The first press intimation came with a denial in the Athenaeum,² and the Art Journal prematurely praised Cole's "great work" while as usual being frank about his shortcomings.³ Ripon spoke to Cole "illusively" (sic) in November 1872. He promised to see Lowe, not Gladstone, about Cole's pension,⁴ and later in the month said that the Chancellor had been "perfectly friendly and promised liberal treatment."⁵ (Cole's notes on this letter show that Ripon "seemed vexed and said that Lowe would not cut the pension because of the accountant business", when he told his chief that he distrusted Lowe).

iv) The question of the succession

In early December 1872 Cole wrote a confidential memorandum⁶ to Ripon, on the organisation of the Department after his retirement, at his chief's request.⁷ This suggested the separation of the offices of Secretary and Director of the Museum. For the first position he had no hesitation in recommending Donnelly. "The extraordinary success and skill with which he has organised the Science teaching of the country, his sound judgment and discretion," were praised, and the latter quality was advanced as one which was very necessary to superintend effectively "the Science Schools with their high and sensitive Professors". (This "competence to deal with the Professors" had been discussed by Cole with Donnelly some months before).⁸ The growing importance of Science in the Museum is shown by Cole's preference for Henry Scott, a Royal Engineer who had succeeded Fowke as Architect.⁹ "Had it been for Art only" he would have recommended R. Thompson (although the latter's slowness had once been noted.¹⁰) Scott was keen on the post,¹¹ and at least one of Cole's friends saw him as a successor. ("Whisper it not", Cole told Elcho when asked about this point.¹²) He was favoured for the position by the Athenaeum,¹³ and the Art Journal suggested that he would be appointed "if only to show how badly the

1 Cole MS Diary 16 January 1872 (conversation with the Duke of Edinburgh)
17 January 1872 (conversation with Ripon).

2 Ath 10 August 1872

3 Art J. September 1872

4 Cole MS Diary 14 November 1872

5 MS letter Ripon to Cole 20 November 1872

6 MS letter Cole to Ripon 1 December 1872

7 MS letter Ripon to Cole 30 November 1872

8 Cole MS Diary 7 August 1872

9 Ibid. 7 December 1865

10 Ibid. 2 November 1865

11 Ibid. 11 October 1872

12 Ibid. 29 November 1871

13 Ath. 25 January 1873

Department would get on without Mr. Cole".¹ Cole ended his memorandum by proposing the grant of a full pension to Redgrave, and the continuation in the office of Assistant Secretary of Macleod.

The arrangements for the succession were complicated by the impending reorganisation of both Departments under one Civil Service head, as will be detailed. Donnelly's claims continued to be pressed by Cole on Ripon,² who would not accept a formal resignation until plans were complete.³ He was not prepared to serve under Macleod, Donnelly said,⁴ and Ripon considered his temporary appointment.⁵ Cole's offer to continue as Director of the Museum in a "purely honorary capacity" if Donnelly became Secretary was referred to, perhaps not completely jocularly, by Ripon as "you still want to have a hold over us".⁶ By mid-May 1873 Donnelly believed that Cole's resignation would not prejudice his chances,⁷ and it was submitted at the end of the month.⁸ Cole received grateful thanks for his services from both chiefs.⁹ The Art Journal, among others, was tired of the delay, and hoped that "Mr. Cole's colleagues will speak out if he does not retire soon".¹⁰ Cole still had time for a quarrel with Macleod, telling the Scot that he "was not yet defunct", wishing to see all correspondence, and saying that he "had not yet handed over his keys".¹¹ He made a last effort in July, suggesting the appointment of Donnelly and Macleod as Joint Assistant Secretaries,¹² but the battle had already been lost. Ripon gave Macleod authority "to act temporarily as you had hitherto been accustomed when Mr. Cole had been absent".¹³ A week later Cole began his removal from his office.¹⁴

Tributes to Cole were many. Redgrave was glad that he left full of honours (and pay)¹⁵ and later thanked him for his intervention¹⁶ in his own case.¹⁷ Playfair, while paying the tribute already recorded, regretted that his

1 Art J. March 1875

2 Cole MS Diary 30 December 1872

3 Ibid. 1 April 1873

4 Ibid. 2 April 1873

5 Ibid. 2 May 1873

6 Ibid. 3 May 1873

7 Ibid. 10 May 1873

8 Ibid. 21 May 1873

9 MS letters Ripon to Cole 22 May 1873 and Forster to Cole 21 March 1873

10 Art. J. May 1873

11 Cole MS Diary 12 May 1873

12 Ibid. 7 July 1873

13 D.S.A.O.B. 31 May 1873

14 Cole MS Diary 14 July 1873

15 MS letter Redgrave to Cole 7 July 1873

16 MS letters Cole to Ripon 8 July 1873 and Ripon to Cole 14 July 1873.

17 MS letter Redgrave to Cole 16 July 1873

"principles" would not allow him to become a member of a Testimonial Committee¹ which was set up.² (The fund eventually came to over £2,000³). The Art Journal paid Cole general acclaim, while saying that it had never concealed its opinions⁴, and later hoped that he would continue to be associated with the Exhibitions long enough to find places for his grandchildren.⁵ (One of Cole's grandsons, Sir Henry Cole, Indian Army, who died in 1932, did, in fact, become Director of the Exhibitions Division of the Department of Overseas Trade after 1918, but even Cole's influence could hardly be said to have persisted for so long!⁶) Nature, which had regretted rumours of the retirement some months before⁷, now listed the "erection of Science Schools and the creation of the Museum" as his greatest achievements, and specifically mentioned Donnelly's work for Science.⁸

b) Institutions and Instruments, and areas of responsibility

i) New foundations and old quarrels

The period 1858-1873 saw the foundation under the Department of the Royal School of Naval Architecture,⁹ the District Museum at Bethnal Green¹⁰ and the Dublin College of Science.¹¹ There also developed the organised system for the encouragement of Science teaching which is detailed below.

While, in general, the relations between the headquarters staff and the institutions under their nominal control appear to have been correct and formal, Cole met defeat in his attempt to cause "Diaries" to be kept by all officers in the Department's service. (The printed form 375 had spaces for time of arrival, time of departure, and proposed duties for the week.¹² This appears to have been accepted without question by all headquarters staff¹³ with the exception of Robinson¹⁴ (as had a previous order that "onions must not be eaten during the hours of museum attendance")¹⁵ The reactions of the Institutions was such, however, that the correspondence was printed by order of the House of Commons.¹⁶

1 MS letter Playfair to Cole 13 July 1873

2 Ath. 5 July 1873

3 Nat. 4 September 1873

4 Art J. July 1873

5 Ibid. August 1873

6 Who was Who 1929-1940 (London Black 1942)

7 Nat. 23 January 1873

8 Ibid. 4 September 1873

9 D.S.A. 13th Report viii

10 D.S.A. 14th Report xviii

11 Ibid. 1-7

12 MS.M 11.148

13 D.S.A.O.B. 1860 undated

14 Cole MS Diary 24 April 1860

15 D.S.A.O.B. 1860 undated

16 P.P. (1860) LIII¹ (557)

Murchison's responses are recorded later.¹ Kane of the Museum of Irish Industry offered to supply the Diaries for his porters, but finally acceded to the request. Steele of the Royal Dublin Society refused point blank.² (The Diaries were still in use at Headquarters in 1869, when they required even more detail,³ but had been given up by 1898, when their re-adoption was recommended.⁴)

ii) The International Exhibition of 1862

The Department was closely involved in Exhibitions. Cole and Dilke proposed an Exhibition for 1861,⁵ to be managed by the Commissioners,⁶ although it eventually was the responsibility of the Society of Arts.⁷ "Napoleon is verily a nuisance", thought the Consort, and "people are cooling in their zeal for the Exhibition"⁸, but despite the state of the Continent, Cole kept the project alive.⁹ "Nobody wished for it except Cole, and it is the great proof of the power of a strong will that it will be a success", believed Granville.¹⁰ An illness of the Consort caused a postponement to 1862.¹¹ A "legislative connection" was made between the Department and the organisers, and the Exhibition plans figured prominently at Board meetings. Cole gave up three months salary in return for a lump sum of £1,500 for his services.¹² He initially proposed Donnelly as joint Manager, but gave up the project when told that "the Engineers at the War Office object ... while they are left to do all the dirty work",¹³ and on meeting with a refusal from Donnelly's military superior.¹⁴ (Donnelly served in a much more humble capacity, as Supervisor of the Catering Department.)¹⁵ The Consort's death caused only a momentary halt, and it was decided to proceed with the Exhibition as a part memorial to him.¹⁶

Part of Cole's zeal stemmed from plans to take over the buildings erected for the Exhibition, at its close, for much needed extensions. After discussing this with Fowke, the Architect, he decided to the contrary,¹⁷ and later said the

1 Chapter VII section (a)(vi)

2 P.P. (1860) LIII¹ (560,561)

3 D.S.A.O.B. 25 January 1869

4 S.C.M. (1898) xx

5 MS letter Cole to Grey 21 December 1858

6 MS letter Cole to Grey 11 January 1859

7 Hudson and Luckhurst op. cit. 206

8 MS letter Grey to Cole 6 April 1860

9 Ath. 4 August 1860

10 Fitzmaurice Life of the Second Earl Granville (London Longmans Green 1905) 229 (letter to Canning)

11 D.N.B. I 231

12 Cole MS Diary 6 May 1861

13 Ibid. 24 April 1861

14 Ibid. 18 May 1862

15 Porter History of the Corps of Royal Engineers (London Longmans Green 1889) II 347.

16 Cole MS Diary 16 December 1861

17 Ibid. 31 December 1869.

Society of Arts should have first refusal,¹ but he then reverted to his original plan and drafted a scheme for their use by the Department.² Paxton's "Crystal Palace" had of course been one of the great features of the 1851 Exhibition. The 1862 Exhibition buildings were execrated at the opposite extreme. Punch had a series of field days, referring to

Architect great CAPTAIN FOWKE
Crowned with his own dome in little
Like some inverted semi-skittle ³.....

It suggested an alteration of the Calendar to make 1 May, the opening day, GUY FOWKES day,⁴ feared "a great likelihood of fire with a live COLE about the place, and sneered at "the Brick Palace".⁵ There was "a surprising want of steam ... with the Boilers so close at hand"⁶ and it wanted "some hauling over the Coles" because of over-high admission fees and generally weak administration.⁷ The chief innovations, which particularly reflected Departmental influence, were an Art Gallery, praised by the Athenaeum as the most successful feature,⁸ and an Education Section. As an attempt to revive the triumphs of 1851, the Exhibition did not succeed, although a small profit was made.⁹

Cole's proposals for the use of the buildings came to naught. The Art Journal denounced the scheme for their purchase by the government as "an example of notorious jobbery".¹⁰ The government intended to use them in addition to house the Natural History collections of the British Museum, and Punch published a full-page cartoon of Palmerston wielding a trowel before the notorious dome, which was labelled "£484,000", and saying "A little bit of stucco will make it perfect".¹¹ The government was defeated on a proposal to purchase the buildings for £105,000, and there was a display of anti-Kensington fervour in the House, which included a quotation of a French visitor's description of them as "a commodious shed".¹² The demolition began the day after the vote was defeated, and the contractors received £100,000 for the materials.¹³ (Some of the fixtures and structures were used in the construction of the first Alexandra Palace at Muswell Hill.¹⁴

1 Cole MS Diary 3 October 1861

2 Ibid. 25 May 1862

3 Pch. 3 May 1862

4 Ibid. 24 May 1862

5 Ibid. 17 May 1862

6 Ibid. 24 May 1862

7 Ibid. 7 June 1862

8 Ath. 5 December 1862

9 Luckhurst op. cit. 131

10 Art J. July 1863

11 Pch. 27 June 1863

12 Hd CLXXII (1863) 74-135

13 Ibid. 1419-1422

14 Alexandra Palace and its Grounds

iii) The Paris Exhibition of 1867

The Department was also officially responsible for the British arrangements for the Paris International Exhibition of 1867.^{1A} Imputations of "jobbery" led to the appointment of a Commons Select Committee^{1B} before which Huxley and Donnelly appeared, but approval was eventually given for the expenditure of £5000 for purchases.² The Art Journal implied that a further £1500 which Cole received for his services had not been earned.³ Redgrave found his duties in connection with the Exhibition particularly irksome.⁴ It was at the Exhibition that a meeting took place between Cole and Whitworth which led eventually to the scheme for the Whitworth Scholarships.⁵ The fears of foreign industrial progress as revealed at the Exhibition were expressed by Playfair in a letter to Taunton,⁶ and this has been seen as the initiation of the great movement for the development of Technical Education. (As a newly elected M.P., in 1869, Playfair also referred to the Exhibition's lessons.⁷) The hope that "means (for Technical Education) ... will be as fully provided ... as abroad" was expressed by Cole, who seized upon the opportunity offered by the letter.⁸

iv) Other developments

Personnel of the Department were also concerned with Cole's scheme for the "Albert Hall of Arts and Sciences". First proposed in 1858, a Company was formed in 1864. The Commissioners gave aid,⁹ and six of the twelve members of the Board were "connected with South Kensington", charged the Art Journal, which doubted its success,¹⁰ a doubt which was shared by the Engineer.¹¹ The Hall, built to a design by Fowke in his private capacity, and making much use of terra cotta, was opened in 1871, and formed a notable addition to the institutions in the Kensington area. Cole's involvement in this scheme is detailed later.¹²

"A move to Charing Cross" for headquarters was hinted at by Salisbury in 1858, and Cole wrote to him post haste to point out that the cost of land would

1A D.S.A. 14th Report xxiii

1B P.P. (1867) X (433)

2 D.S.A. 15th Report 21

3 Art J. June 1868

4 MS letter Redgrave to Cole 28 August 1867

5 Chapter XII section (d)(i)

6 Schools Inquiry Commission RP. (1867) XXV 1

7 Hd. CXCVIII (1869) 204

8 D.S.A. 15th Report xii

9 Engr. 27 April 1866

10 Art J. April 1866

11 Engr. 24 May 1867

12 Chapter IV section (b)(iii)

be immense, that "dirt and noise would be great," and that the Sheepshanks collection¹ could not be removed from Kensington.² Redgrave assured Cole, on sick leave, that "Salisbury strongly inclines to stay where we are, and keep the land government has paid for".³ Five years later Cole seems to have had a scheme to campaign for the move of the Education Department to South Kensington, but nothing came of this.⁴ The question of location did not arise again until the very end of the Department's existence. Cole himself took up an official residence at the Museum in 1863.⁵

The Department received a Charter which gave it the right to hold land, administer trusts and so on, in 1864.⁶ There was an unsuccessful attempt to remove the Department's responsibilities for Ireland. "A waste of public money, and bad for the work", was how Cole saw the proposal for a separate "Irish Science and Art Department",⁷ and the Lord President, Buckingham, "refused to have responsibility without power".⁸ A Commission, of which Huxley and Donnelly were members,⁹ was set up. The Chancellor of the Exchequer promised a deputation that "Ireland would have its own Department",¹⁰ but the Commission eventually recommended that there should be no separate establishment,¹¹ a decision in which the Athenaeum "cordially joined",¹² after "many teachers and students petitioned for the maintenance of the connection ... to ensure the highest rewards and the best promise of a career!"¹³

The Department faced shortages of financial aid during the period, particularly at the time when Lowe was Chancellor of the Exchequer¹⁴, and administrative staff had to be cut at one period.¹⁵ Annual expenditure rose steadily, however,¹⁶ despite Parliamentary criticism, and one result of the growing demand for Technical Education was a relative increase in funds available.¹⁷

1 Chapter IX section (c)(i)

2 MS letter Cole to Salisbury 27 August 1858

3 MS letter Redgrave to Cole 11 November 1858

4 Cole MS Diary 8 January 1863

5 Ibid. 29 June 1863

6 D.S.A. 12th Report 171 and MS letter Cole to Grey 8 April 1864 (Noted in pencil in Cole's hand "Passed by Queen in Council")

7 Cole MS Diary 25 January 1868

8 Ibid. 4 February 1868

9 Ibid. 27 March 1868

10 Art J. May 1868

11 D.S.A. 16th Report xxiv

12 Ath. 17 February 1869

13 Nat. 17 February 1876

14 MS letter Redgrave to Cole 24 December 1868 and Cole MS Diary 20 November 1858, 27 January 1859, 28 May 1868, 8 April 1872, 30 July 1872.

15 MS letter Redgrave to Cole 21 July 1869

16 Table LVI

17 Cole MS Diary 7 December 1867

One field in which economy never seems to have been contemplated was in the production of the Annual Reports, which continued to give in fine detail, fortunately for the researcher, accounts of the Department's work in all its spheres of activity. A plea for abridgement in the Illustrated London News was referred to by Cole's friend Chadwick in 1867¹, and when Cole appears to have charged that the Health Department's own Reports were too bulky, Chadwick riposted that the Department's Reports and costs could be cut by a quarter.² The Athenaeum complained of "elaborate appendices", and of much superficial detail³, but the flow continued unabated.

c) The development of facilities in the teaching of Art

i) General features

The period saw the culmination of the process for the establishment of a system of Art education, centrally inspired, encouraged, and, despite professions to the contrary, controlled, but finding much of its finance from local sources on a basis of self support. There were three important developments. The first of these was the establishment of a system of Art Night Classes which were largely staffed by elementary school teachers. These were mainly designed to provide instruction in Mechanical Drawing.⁴ There were fears of "education on the cheap", which might "lead to a distaste for fine Art",⁵ but the schools developed greatly in numbers.⁶

The second feature was a dispute, in which the Department was involved although it did not begin it, with the Art Unions. These had begun to develop at about the time of the foundation of the Schools of Design. (Their organ, the Art Union Journal, became the Art Journal in 1849). The Unions, in an attempt to popularise Art, by the publication of cheap engravings, gave the originals to the holders of winning tickets at annual draws which were "lotteries within the meaning of the Act". (An Enquiry into their affairs had been held in 1844 and 1845). The Art of Union of London offered prizes to Schools of Art in 1861, and Cole's draft of the announcement shows that he underlined, in red ink, the words "with the concurrence of the Department".⁷

1 MS letter Chadwick to Cole 26 June 1867

2 MS letter Chadwick to Cole 27 May 1868

3 Ath. 24 July 1869

4 D.S.A. 13th Report xii

5 Art J. January 1872

6 Table XVIII

7 MS.M 13.15

Permission was granted for an Exhibition of Art Union Sculptures in the Museum in 1864.¹ When a second Enquiry was held by a Commons Select Committee in 1866, Cole and Redgrave were called as witnesses. The Unions had had very little effect on "the elevation of public taste", an improvement which he claimed exclusively for the Department, said Cole, and their "encouragement of inferior paintings" was Redgrave's chief objection to their existence. (This cannot have increased the Department's popularity, usually at a low ebb in any case, with the Art Journal). The power which the Committee recommended should be given to the Department, of being able to institute proceedings against any Union which infringed the Lottery Acts, was never used if it was ever granted.²

The third feature of the period was the development of a scheme which could only have sprung from the mind of an arch systematiser. This was a "Universal Catalogue of Works of Art". First suggested by Cole³ (although claimed by the Athenaeum as having been mooted in its columns before 1851⁴) it was approved by Granville⁵ and by Buckingham.⁶ Walter of The Times was persuaded by Cole to print the Catalogue, by instalments and without profit, in his newspaper⁷, but this manner of publication was given up. The scheme appears to have involved an attempt to publish the titles of all books on Art published in every century and in every tongue. The project was pointless and would cause untold opposition, Cole's friend, the M.P., Gregory, advised.⁸ The Editor, Thackeray's protégé Pollen,⁹ was, in Cole's view, extravagant and inefficient, and Cole rapidly lost interest. When he refused to accept further responsibility, Buckingham was "very nasty and did not like my idea to reduce".¹⁰ (He had agreed to the serial publication in Notes and Queries.¹¹) Cole then, on his own initiative, reduced the printing estimates because he feared Commons opposition, and as a result, Buckingham gave him "the most severe reprimand I have ever received and said he would not tolerate such action". Cole immediately turned on Pollen "and told him he was no man of business".¹²

1 MS.M 17.176

2 P.P. (1866) VII (332) Cole AA. 500-626, Redgrave AA.627-659. See also Anthony King George Godwin and the Art Unions Victorian Studies (University of Indiana December 1964) VIII 2 101-130

3 Cole op. cit. I 341

4 Ath. 27 July 1867

5 Hd. CXC (1868) 1218 (Montagu)

6 Cole MS Diary 9 April 1867

7 Ibid. 13 December 1866

8 MS letter Gregory to Cole 25 January 1867

9 Cole MS Diary 31 July 1859

10 Ibid. 23 June 1868

11 Ibid. 19 November 1867

12 Ibid. 11 July 1868.

The question dragged on into the next administration. In May 1871 Cole finally referred Pollen to Ripon, the new Lord President, telling him that Pollen "had chiselled the public".¹ The Catalogue ended its days in manuscript in the Art Library, where, in the opinion of a later Librarian, it was "of little value as a reading room catalogue".² (Pollen remained as Editor of the Department's Publications until 1875³ when he retired to become Secretary to Ripon, a fellow convert to Roman Catholicism.⁴) The Catalogue affair shows the way in which a semi-independent project could get out of hand, and it gave added fuel to the Department's foes in Parliament⁵ and elsewhere. The period saw the final consolidation of Cole's schemes for "self support", by means which were intended to reduce central aid, and to ensure that this aid was efficiently utilised.

ii) The introduction of the full scheme of payments on results in Art.

"The whole system is now nearly self supporting", Cole claimed in 1864.⁶ In the early 1860's he began to devise schemes for the revision of the system which would throw greater responsibility on local authorities. A system which would "render the teacher's pay more dependent upon the results of his own exertions" involved the abolition of the guaranteed salary enjoyed by the majority of the teachers, and of the certificate allowance received by the rest. Rather than give up such a check, he would close the whole Department, Cole said later.⁷ Opposition to his schemes led to the setting up of a Commons Select Committee on Schools of Art in 1864, and evidence before that Committee reveals, in a wealth of detail, details of the system and its reception by masters, manufacturers and others.

The "brilliant success" of the 1859 Science scheme, the 'commercial principle' which was involved in the adjustment of payments, the ways in which it could be used to "make Art education less of a charity and therefore more appreciated", and, he claimed, the promise it held of an eventual abolition of all grants, recommended it strongly to Cole.⁸ A "Board to settle payments on

1 Cole MS Diary 4 June 1871

2 S.C.M. (1897) A.7004

3 Cole MS Diary 23 December 1875

4 D.N.B.

5 Hd. CXC (1868) 1216-1218

6 S.C.S.A. A.4366

7 Ibid. A.4372

8 Ibid. AA. 538, 539, 255, 493, 295, 4421, 4315, 4518 (Cole)

D.S.A. 8th Report 9, Donnelly Memorandum, MS.M 18.132 (June 1864), and D.S.A. 10th Report 9.

results to Art Masters and poor Schools" was held in mid-1862.¹ Redgrave gave advice², and the outcome was a series of Minutes which abolished masters' certificate payments and instituted a full system of payment on results, which would be restricted to "artisans, designers, and the children of the poor" and which would pay sums on works successfully completed. Payments would be made to a central fund and the Local Committee would decide the method of division between the teachers.³ Cole strenuously opposed any "capitation" system which would involve payments on attendance: this, he said, would be open to "jobbery" and falsification of registers, and expenditure would not necessarily be in proportion to the value of instruction.⁴

It worried Cole and Redgrave little that the system meant a closely prescribed course, and the laying down of principles which could be "examined". "Without medals, and the course, masters would teach the same slip slop as before", said Redgrave.⁵ "The Department has to be a little despotic at times in regulating what has to be done", said Cole. "Art theory is not so fixed and definite as in Chemistry or Mechanics".⁶ That the state, that is, Cole and Redgrave, could lay down standards where by Cole's own definition none existed, seems not to have concerned him. Sir Charles Eastlake, P.R.A., and as Chief Art Examiner not a completely disinterested witness, went further. The course, he said, must be defined because it was elementary. The more stereotyped it was, the safer it became. He highly approved of Redgrave's "nature based" system, and admired the "Department's boldness in devising a course which could not be bettered".⁷

iii) Reactions and results

The strong reactions of the Local Committees and of the masters are detailed in the appropriate chapters.⁸ The burden of their refrain was one of over-regulation and interference.

Before the 1864 Committee, Cole reiterated his belief that local rates plus fees would be the best form of support.⁹ Four of the six witnesses who

1 Cole MS Diary 28 May 1862

2 Ibid. 18 August 1862

3 Ibid. 18 February 1863, D.S.A. 10th Report lx, 3, 6, D.S.A. 11th Report 10, and P.P. (1863) XLVI

4 Cole MS Diary 22 September 1864 and S.C.S.A. A.4330

5 S.C.S.A. A.4565

6 S.C.S.A. AA. 583 and 554

7 Ibid. AA. 3472, 3482, 3503 and 3512

8 Chapters VIII and XI

9 S.C.S.A. A. 461.

mentioned the matter believed that such aid would be impossible to achieve.¹ A fifth, from the only locality which raised such a rate, Cork, agreed when questioned by Lowe that this meant that the middle classes received most benefit, since fees could be reduced.² The sixth witness was from Burslem, where a premature report of success had caused the Department to circulate copies of the School Report the year before.³ His Committee were "endeavouring to raise a rate and hoped to succeed".⁴ (Burslem finally got its rate, but it took another five years to do so.⁵)

The Select Committee agreed with the majority of witnesses that "payment on results" was "not well adapted to Schools of Art". It urged that votes for Schools and Museums should be separately shown, recommended capitation payments, a curtailment of prizes, the discontinuation of the provision of examples at reduced cost, and an abolition of building grants, but said that the provision of its own premises should be made a condition of grant to a School.⁶ The Department's reaction was to claim that the Report confirmed the soundness and success of the policy. It defied the Committee on capitation, saying that this would violate the principle of making instruction valued. It ignored the recommendations on "payments on results", but did agree to show future votes in greater detail. The only recommendations it followed, perhaps to show how unpopular such a step would be, were that building grants and the cheap supply of examples should be abolished. (These were brought back after deputations). It refused to revert to payments on masters' certificates.⁷ "My Lords" told one M.P., Beresford Hope, that it was their responsibility to decide whether the Committee's recommendations should be followed, and since they could not justify such actions to Parliament, they could "offer no prospect of any return to the system".⁸ The Committee's views and provincial protestations were thus in effect disregarded. The usual opponents continued to assail the Department in the Commons, but there were never any specific charges that the Committee had been so ignored.

1 S.C.S.A. A.4522 (Keith), A.3421 (Parker), A.3715 (Akroyd), A.1680 (Bacon).

2 Ibid. A.3255 (Brenan)

3 MS.M 17.74

4 S.C.S.A. A.3897 (Hollins)

5 D.S.A. 17th Report xiv

6 S.C.S.A. viii, xvii, xviii

7 P.P. (1865) XLIII(1-5) and D.S.A. 13th Report 23-27

8 MS.M 18.30 (Letter of 13 January 1865)

The absence of Department officials from prize-givings was significant, said the Art Journal:¹ the Minutes were "ungenerous to Schools, unfair to Masters, and an insult to Committees".² There would be "a complete cessation in the provinces", predicted the Athenaeum.³ A "mass of correspondence, unanimous in its condemnation", was later reported by the Art Journal.⁴ The reactions and responses of the Schools are noted in the appropriate chapter,⁵ but in the end they survived by adopting the very measures which it had been intended that they should, and which they had opposed, chiefly, an increase in fees. The Department made minor concessions by increasing payments slightly,⁶ and by developing a "bonus scheme" for masters whose Schools had the best all round results.⁷ "You may do what you can and they will always be wanting more", Cole told the 1864 Committee.⁸ The only real benefit to the Schools which resulted from its deliberations was an end to the hated rule that the masters must work in Elementary Schools. Local Medals were abolished in 1867,⁹ but, conversely, aid on examples was increased in 1868.¹⁰ By refusing to bow to criticism, and by holding firmly to its policy, the Department had succeeded in forcing the full scheme of payments on results on the reluctant Schools.

d) The development of facilities in the teaching of Science

i) The initiation of the Scheme of 1859

As Playfair gradually withdrew from the Department's affairs, Cole began to work on a Science scheme himself.¹¹ He talked with Kay-Shuttleworth about "help in teaching Science in East Lancashire",¹² tried unsuccessfully to obtain funds from the Commissioners "to promote prizes in Mechanics Institutes",¹³ and put a tentative scheme to "my Lords", without success.¹⁴ On the reorganisation following Playfair's resignation, as has been seen, Cole was prepared to brook no successor to his departed friend. It was, however, the direct interest and intervention of Salisbury, the Lord President, which led to the

1 Art J. February 1865

2 Ibid. April 1865

3 Ath. 29 April 1865

4 Art J. May 1865

5 Chapter VIII sections (b)(iv-v)

6 D.S.A. 14th Report 170

7 Cole MS Diary 2 January 1868 and D.S.A. 15th Report 17-18

8 S.C.S.A. A. 4372

9 D.S.A. 14th Report 170

10 D.S.A. 15th Report 18

11 Cole MS Diary 14 August 1857

12 Ibid. 5 February 1858

13 Ibid. 2 and 3 March, 4 April 1858

14 Ibid. 14 August 1857

inception of the first successful scheme for science teaching, and this activity was not always viewed kindly by the chief officials. Salisbury was described by his grand-daughter as "obstinate in adhering to his views, uncompromising in the defence of his rights, resentful of all outside interference ... He had a dominating sense of public duty ... an unhesitating responsibility in the performance of it ... and a constant impulse of opposition to all experts in whatever connection they appeared."¹ These qualities were to be shown in his brief tenure of office as Lord President, especially in his desire "to do something for Science". The position was complicated by the fact that Cole was out of the country on sick leave for much of late 1858 and early 1859, and Redgrave had to fight a holding action with his chief. Salisbury "wanted a little Science" but Redgrave said "I told him we were quite unable to ascertain, beyond the Navigation School, whether there was any Science".² "I do not care to add to business with you away", he told Cole, and feared much "organisation and attendant difficulties".³ He believed he could "delay anything being done ... until you return", but was sure that "something will be done".⁴

"Lord Salisbury declared that 'unless you can get a scheme to make science common wherever the public want it; I shall abolish the name'," Cole said later.⁵ He "put us under a constraint ... we had to grope in the best way we could ... we had no teachers, we had no diagrams, in fact, we just had to do the best we could".⁶ Cole lost no time on his return from sick leave.⁷ Redgrave, Fowke, Macleod and Donnelly of the Department,⁸ Chester of the Education Department and Society of Arts, who believed a scheme would be premature,⁹ and Kay-Shuttleworth¹⁰, were all consulted. In late March came the Board meeting where Salisbury "vowed to get rid of the name".¹¹ (Salisbury "threatened that the Department would have to teach his carpenters Science, or go out of business," Cole recorded in his Autobiography¹², but there is no reference to this avowal in the Diaries or in Cole's subsequent evidence at Enquiries).

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- 1 Lady Gwendoline Cecil Life of Robert Marquis of Salisbury (London Hodder and Stoughton 1921) 4-5
 - 2 MS letter Redgrave to Cole 5 October 1858
 - 3 MS letter Redgrave to Cole 4 December 1858
 - 4 MS letter Redgrave to Cole 20 January 1859
 - 5 S.C.S.I. A.44
 - 6 R.C.S.I. A.183
 - 7 Cole MS Diary 5 March 1859
 - 8 Ibid. 24 and 28 March 1859
 - 9 Ibid. 29 and 30 March 1859
 - 10 Ibid. 13 April 1859
 - 11 Ibid. 31 March 1859
 - 12 Cole op. cit. I 310

Adderley, the Vice-President,¹ appears to have thought that Salisbury was being prematurely ambitious.² Salisbury was convinced that the Treasury would not agree to salaries for teachers³ and, therefore, the officials had recourse to an extension of the system of payments on results which had been developed on a small scale in Ireland, in Science, and in the rest of the U.K. in Art, since 1856. A number of Board meetings were held to discuss arrangements,⁴ and Adderley held out against over-payments at a four hour meeting in June at which regulations were finally approved.⁵ Cole took further advice from Hofmann⁶ and drafted the final form of the "Science Minute".⁷

Salisbury and Adderley left office in early July 1859, so that the Minute was passed by the "new masters",⁸ Granville and Lowe on 5 August 1859,⁹ although as published it was dated 2 June, the day of the "four hour session".¹⁰ "The industrial classes" would be "assisted in supporting themselves with the rudiments of instruction in Practical and Decorative Geometry, Physics, Chemistry, Geology, and Natural History". "Competent teachers", who had to obtain appropriate grades in special examinations, would receive payments on their students who successfully passed annual examinations: the payment would increase from £1 per student for a third class pass to £3 for a first class pass. (For a brief period this was increased to £5 for a first class pass). A Local Committee, as in Art, would find and maintain suitable premises, the Department would "inspect and examine" once a year, and there had to be a minimum of ten students who had paid fees six months in advance. A scheme of "local" and "National" examinations seems initially to have been envisaged;¹¹ the "National" examination in London was eventually retained only for the teachers.

There appears to have been some difficulty in persuading the Cabinet of the soundness of the scheme which it had inherited from the previous administration. "Notes on the Department for the Cabinet" were prepared by Cole at Lowe's request¹², and he also prepared a letter for the Treasury, which insisted

1 Biographical Appendix
 2 Cole MS Diary 5 April 1859
 3 Ibid., 8 April 1859
 4 Ibid. 15 April, 23, 26, and 28 May 1859
 5 Ibid. 2 June 1859
 6 Ibid. 18 July 1859
 7 Ibid. 21 July 1859
 8 Redgrave op. cit. 218
 9 Cole MS Diary 5 August 1859
 10 D.S.A. 6th Report 13
 11 MS.M 10.9 and 10.84
 12 Cole: MS Diary 13 November 1859

on having full details.¹ Lowe told Cole that he "did not care for science"² and that "expenditure must be for the poor only",³ but Cole probably used a letter from the Lancashire and Cheshire Union which referred to "great deficiencies in science instruction"⁴ to strengthen the case.

"Adult evening education" had been carefully considered by the previous chiefs⁵, and Cole drafted a wider Minute on this theme at Lowe's request.⁶ After a discussion with Chester⁷, Lowe decided to take no action, "as the Society of Arts" (which was developing its own examinations system) "stood in the way".⁸ This "adult" concept was to cause much difficulty with the Education Department in the years to come.

ii) The development of the system of payments on results in Science

Within a very short time of the promulgation of the new regulations, the system was well under way. The first teachers' examinations were held in November 1859⁹ and the first students' examinations in May of 1860.¹⁰ A Science Directory was first issued in March of that year.¹¹ This, with the Annual Science Report, was the responsibility of Donnelly, although Cole "revised" it.¹² J.C. Buckmaster,¹³ one of the very few teachers who had received training both at a Training College and at Jermyn Street,¹⁴ was appointed as "Organising Master" at Cole's suggestion. He visited the provinces "not as the representative of the Department in the light of being authorised to make any arrangements ... but merely giving such advice as a practised teacher is qualified to give."¹⁵ The Local Committee paid his fee, while his travelling expenses only were paid by the Department.¹⁶ (One visit, to Banbury, resulted in prolonged correspondence, when it was claimed that he promised more than the Department eventually allowed: the defence was that he had "adhered strictly to the rules of the Science Directory".¹⁷) Within a few months of his appointment, tributes were paid to the success of his efforts.¹⁸

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- 1 Cole MS Diary 17 August and 14 September 1859
 - 2 Ibid. 31 October 1859
 - 3 Ibid. 4 November 1859
 - 4 Ibid. 11 November 1859 and D.S.A. 13th Report 35
 - 5 MS.M 10.9
 - 6 Cole MS Diary 8 December 1859
 - 7 Ibid. 14 December 1859
 - 8 Ibid. 30 December 1859
 - 9 D.S.A. 7th Report 8
 - 10 D.S.A. 8th Report 27
 - 11 Bartley op. cit. 127
 - 12 Cole MS Diary 26 August 1868
 - 13 Biographical Appendix
 - 14 MS.M 3.16, 5.24 and 5.97
 - 15 Ibid. 13.10.
 - 16 Ibid. 13.23
 - 17 Ibid. 14.141
 - 18 Ath. 1 June 1861

Higher fees were urged "as the only solid basis of self support", as "aid to persons who do nothing for themselves cannot be justified".¹ Good results were encouraged by a system of Queen's Medals which were restricted to artisans, although middle class students could qualify for the certificate which was awarded to all students.² The "machinery" of the system of payments, and the ways in which it could be used to regulate expenditure and to produce developments satisfactory to the Department, is detailed later.³ Certain features, such as the abolition of the special teachers' examinations from 1866,⁴ the introduction of a division into Elementary and Advanced papers in 1864,⁵ and regulations designed to encourage more advanced instruction,⁶ practical work⁷ and "grouped" courses⁸ must be noted here.

Cole must be given credit for making his system "begin at home" by issuing a regulation that officers appointed as provisional clerks would receive no promotion until they had passed examinations in Drawing or Science.⁹ The successes of Bartlett, Bartley, Gilbert Redgrave and Alan Cole were subsequently reported to the Board.¹⁰ Before this, Punch had suggested that "My Lords" had decided to pay their clerks and scientists "by the job"... (Although Mr. COLE said that he was "opposed on principle to all forms of "jobbery")" and went on to give a "scale of payments" which included "naming a fossil 1/-" and "answering the Secretary's questions".¹¹ The reactions of teachers and others to the system are recorded later.

iii) New demands and solutions

"The science plan" depended entirely "on pleading to private venture ... In order to get it enlisted, you have to bribe pretty highly", Donnelly said.¹² The spread of science teaching in the first years^{was} "almost entirely due to the teachers' missionary effort".¹³ While public demand for science teaching was "very slow" and "apathy" was "just being removed",¹⁴ the Department sensed a greater readiness for development on the part of politicians and manufacturers as the demand grew for "Technical Instruction". In 1868 Cole still believed

1 D.S.A. 11th Report 1

2 Ibid. 3

3 Chapter VI section (d)

4 D.S.A. 15th Report vii

5 D.S.A. 13th Report 46

6 D.S.A. 16th Report 6.7

7 D.S.A. 18th Report 24

8 D.S.A. 19th Report 25-27

9 D.S.A.O.B. 7 May 1863

10 Ibid. 22 December 1863 and Cole MS Diary 27 November 1866

11 Pch. 14 March 1863 (This was the only charge of jobbery imputed by Punch, which normally defended Cole).

12 R.C.S.I. AA. 6346 and 6449

13 D.S.A. 16th Report 60

14 R.C.S.I. A. 5954 (Cole)

that it would "pauperise the country if there were unlimited aid" and stressed "the need for extreme caution",¹ He was so keen on payments on results that he suggested the abolition of teachers' salaries in primary schools, with only an "augmentation grant" for certificated teachers, while "others would sink or swim" by the success of their teaching.² At that time, in Donnelly's opinion, there was "no other way to ensure economy and the proper control of public funds", and the system "worked so well and permitted freedom of action".³

By 1871, the officials were prepared to admit the need for increased state aid. The system was "most insufficient if more than night instruction was wanted", Cole admitted. Even as it was, more Inspectors were needed to discover the defects of "a system which was getting very large, with increased expenses". Cole was now "all for state help, but not competition". While still stressing "local wishes and local action", his beloved "laws of public economy did not apply to education ... the public do not want education very much. It has to be forced down their throats". It was now, he thought, "the function of the state to interfere and ... get people interested in Science".⁴ (By 1875, he had gone so far as "strongly to refute the argument that aid saps independence")⁵ The organisation, which was "settled and working very well",⁶ had "prospered beyond the most sanguine expectations". Even though it had been "a rough and ready process", it had "commended itself to the country ... purveying science in some shape." There had been "some crumbs of instruction" and the formation of a body of competent teachers had been a foundation for the future.⁷ "The object of the state is to have results" said Donnelly. "The machinery", he went on, "is immaterial ... but the humblest beginnings have done much good, and where no good results have followed, no appreciable mischief has been done".⁸

The Department was moving away from the belief of 1859, that teachers could be supplied cheaply,⁹ to the point where special training was being considered,¹⁰ and this development was to be a most important feature of the

1 S.C.S.I. A. 292

2 Ibid. Appendix xii

3 Ibid. A.420 and Appendix xi 68

4 R.C.S.I. AA. 22, 34, 114, 126, 6007, 6012 and 6109

5 Observations delivered at the Lancashire and Cheshire Union, Manchester, 25 October 1875 (Privately printed)

6 S.C.S.I. A.22

7 R.C.S.I. AA 2, 8, 17 and 20 (Cole)

8 D.S.A. 18th Report 52

9 D.S.A. 7th Report 33

10 D.S.A. 18th Report 51

next decade.¹ The teaching in "cellar ... or garret"² or in teachers' private houses³ was supplemented by the provision of aid in the erection of special buildings, equipped for the task, by the building grants of 1868⁴ and the laboratory grants of 1871.⁵ It is not here suggested that the cherished principles of self support and payments on results were about to be abandoned, but rather that the Department was now more prepared to consider greater aid, if the government could be persuaded to make it available. As will be recorded later, although there were still critics, the general opinion of the Department's efforts was a good one. By the end of the period, the system of motivation by assistance through payments on results was as firmly established in Science as in Art.

e) The Technical Instruction movement and its effects

i) The Paris Exhibition and its effects

Cole's old friend John Scott Russell "came to talk about scientific education" in 1865,⁶ and later produced a scheme which was dismissed as "costly and impracticable,"⁷ while Cole "declined to agitate with him ... as incompatible with my Office".⁸ The real impetus to a national movement was given by Playfair's letter to Taunton, on the lessons of the Paris Exhibition, to which reference has been made. This met with the approval of the Engineer,⁹ despite the belief in some quarters that the real reason for Continental superiority was the cheapness and loyalty to the employers of the foreign workmen.¹⁰ Although Cole was later to "upbraid Playfair for not doing more for Science and Technical Education",¹¹ he welcomed his move. He gave Iselin "special responsibility for Technical Education",¹² drew up his own scheme¹³, and noted that Disraeli would be informed of it.¹⁴ The plan seems to have envisaged provincial "Science Colleges", where work would lead on to "a degree of some University".¹⁵ It would appear to have foundered because of lack of funds at a time of financial stringency. One more immediate consequence

1 Chapter VII sections (a) (ix-xi) and Chapter XI section (B)(c) and (e)

2 Cole liked this phrase. He used it in 1868 (S.C.S.I. A.158) and repeated it in 1871 (R.C.S.I. A 2)

3 R.C.S.I. A 12 (Cole)

4 D.S.A. 16th Report 58

5 D.S.A. 19th Report 17

6 Cole MS Diary 11 October 1865

7 Ath. 22 May 1869

8 Cole MS Diary 16 April 1869

9 Engr. 19 July 1867

10 Engg. 2 August 1867

11 Cole MS Diary 20 June 1869

12 Ibid. 3 December 1867

13 Ibid. 15 January 1868

14 Ibid. 23 January 1868

15 Ibid. 25 and 26 January and 23 February 1868

of the Paris Exhibition and the Playfair letter was the development of the scheme for Whitworth Scholarships, to which later reference will be made.¹

ii) Committee and Commission

The first political consequence of the movement was the appointment of a Select Committee of the Commons, the "Samuelson" Committee, in 1868. The Committee were "all adrift", Cole was told by Gregory², and while Cole was "personally averse to the Department being examined first"³, he was in fact the first witness to be called,⁴ and noted Playfair's "disgust at having to wait"⁵. Samuelson tried to get him to propose "a separate Scientific Establishment", but he opposed this "because it would lack power".⁶ The Committee's criticisms of the Department were based mainly on the grounds that its science instruction was "rudimentary" and "abstract",⁷ and Samuelson repeated this criticism in the House, doubting particularly if "an officer of Engineers could effectively direct scientific education".⁸ (Donnelly much later regaled Huxley with stories of "Ikey's" discomfiture at the hands of a confidence trickster⁹ and of his mean-ness¹⁰.) Seven pages of the 1869 Report were used by Donnelly in refutation of the criticisms.¹¹ The Committee's recommendations for "superior science schools"¹² led to a further consideration of "Science Colleges" by the Department, again without result.¹³

Neither Donnelly nor he was consulted, Cole complained, when the Royal Commission on Scientific Instruction was appointed in 1870.¹⁴ (It sat until 1873 and produced six monumental Reports in several more volumes). On the occasion of his first examination, Cole noted "very discursive ... except for Huxley and Kay Shuttleworth, nobody knew much about the subject."¹⁵ The Commission, despite Cole's low opinion of its composition, was much more laudatory of the Department than had been its predecessor, possibly because of the presence of the members noted by Cole.

1 Chapter XII section (d)(i)
 2 Cole MS Diary 7 May 1868
 3 Ibid. 8 May 1868
 4 S.C.S.I. A.1
 5 Cole MS Diary 30 April 1868
 6 Ibid. 16 May 1868
 7 S.C.S.I. iv
 8 Hd. CXCVIII (1869) 158-159
 9 MS letter Donnelly to Huxley 16 February 1888
 10 MS letter Donnelly to Huxley 12 May 1889
 11 D.S.A. 16th Report 55-61
 12 S.C.S.I. ix
 13 Cole MS Diary 10, 18, 25 February and 15 March 1869
 14 Ibid. 21 May 1870
 15 Ibid. 14 June 1870

iii) Technological examinations

The Department's objections to instruction beyond that in "principles of science as applied to industry" did not mean that it was unsympathetic to more technological instruction, but that it felt that state aid should not be used in its encouragement.¹ Thus, when the Society of Arts proposed to give up its own examinations² in 1871, because of the competition of the Department's system, it was Donnelly who proposed that they should be continued in a different form, which would supplement the Department's scheme.³ While he found it "a distraction from his Technical School idea,"⁴ he presented his scheme to the Society in July 1872.⁵ The first examinations, in such subjects as "Iron", were held in September 1873,⁶ although only six candidates presented themselves on that occasion.⁷ The scheme "bore distinctly on the face of it that it was carrying on the work of the Department", said Donnelly later, and he added that it was because he felt so strongly on the value of technical instruction that he developed it.⁸ Donnelly also encouraged the Reverend W.H. Solly's "Trades Guild of Learning", as a Vice President and subscriber, attending its first meeting in 1873, and subscribing also to its successor, the "Artisans' Institute".⁹ The suggestion that an even richer source of income should be tapped was made when an approach to the "City Companies" was mooted at a meeting of the Social Science Congress in 1873.¹⁰ Later in the decade, again with the aid of Donnelly, the Society of Arts examinations were taken over and developed even more to supplement the Department's system. The increased demand for technical instruction led the Department to move away from its stress on "self support" and "economy", as had been recorded.

f) The influence on Departmental policy of political chiefs

i) Salisbury and Adderley (Second Derby Administration) (1858-1859)

The forthright Salisbury was a "good man of business",¹¹ "liberal in his views on estimates",¹² "fond of building"¹³ and ready to support the Department

1 Chapter VI section (g)

2 Chapter XVII section (A)(a)(iv)

3 Hudson and Luckhurst, op. cit. 254 and Ath. 8 April 1871

4 Cole MS Diary 13 October 1871

5 C.T. Millis Technical Education (London Arnold 1925) 58-59

6 Engg. 5 September 1873

7 Hudson and Luckhurst op. cit. 254

8 R.C.T.I. A. 2870

9 Millis op. cit. 40-42

10 N.A.P.S.S. 1873 Report 398 (J.H. Yeats)

11 MS letters Redgrave to Cole 15, 24 October, 11 November and 4 December 1858

12 MS letter Redgrave to Cole 11 November 1858

13 MS letter Redgrave to Cole 10 February 1859

against any "move to Charing Cross". He remained interested in the Science scheme even when he left office. When he started a school on his estate, he asked Cole for lists of apparatus and diagrams, so that perhaps his carpenters were eventually taught science.¹ Adderley, the Vice President, made much less impact. He raised "points ... exploded years ago"² and was "rarely seen". He was "much less friendly to the Department than Lord S ... and seems to object to state aid in anything".³ (Many years later, as Lord Norton, he remained unsympathetic to the idea of the development of "popular" education if it was not aided by local and individual effort.⁴) He reduced estimates despite objections⁵, and "wished to reduce the Science scheme to zero".⁶ (He was later credited, unfairly, with the origination of the scheme.⁷) Cole met both his chiefs on social terms and stayed at their country homes:⁸ he found Salisbury "liberal and intellectual",⁹ but his views of Adderley are not recorded. While the actual scheme for science teaching was carried through by his successors, Salisbury's effects on policy during his brief tenure of office were to be among the most far-reaching in the whole of the Department's history.

ii) Granville, Lowe and H.A. Bruce (Second Palmerston and Second Russell Administration) (1859-1866)

Granville's second period as Lord President, and his third as Cole's chief, was marked by his usual calm and reasonable approach. He "would speak quietly to the Duke of Somerset" when Lowe objected to the fact that he had not been shown estimates for the School of Naval Architecture,¹⁰ advised Cole to make concessions when he was at logger-heads with fellow members of the Society of Arts,¹¹ and personally brought a letter of thanks to all the officers when he left Office.¹² Out of Office, he quoted the success of its schemes.¹³ (There was some breach between the two in 1876, when Granville "was not in my usual mood with you"¹⁴, but Cole was talking of "My Lord President of old" later in the year,¹⁵ and he, in his turn, was "Dear Felix Summerly"¹⁶). Granville's

1 MS letter Salisbury to Cole 21 December 1859

2 MS letter Redgrave to Cole 15 October 1858

3 MS letter Redgrave to Cole 16 November 1858

4 N.C. February 1883 and November 1885

5 MS letter Redgrave to Cole 14 December 1858

6 Cole op. cit. I 311

7 N.A.P.S.S. 1859 Report 404

8 Cole MS Diary 28 July 1857, 20-21 August 1857

9 Cole MS Diary 6 August 1867

10 Ibid. 8 February 1864

11 Ibid. 20 April 1864

12 Ibid. 6 July 1866

13 Hd. CXCI (1868) 820-821

14 MS letter Granville to Cole 5 March 1876

15 MS letter Cole to Granville 1 June 1876

16 MS letter Granville to Cole 9 January 1879.

equable and diplomatic manner must have been of great value at a time of much strain, when the greatly expanding Department was running into increasing difficulties with its sister Department. Punch must have spoken for many, on Granville's death in 1891, when it said

"Temper unstirred, unerring tact were his
Faith, GRANVILLE, we shall miss thee much"¹.

The views of Robert Lowe on public education were that "education should be for the poor only",² that "middle class" institutions like "Jermyn Street ... could not be justified",³ but that "education for the labouring poor (should be) sufficient to the station (it should) please God to call them .. let us clear our minds of all cant."⁴ He was, however, "pleased that £100,000 was invested in works of Art"⁵, personally supported the establishment of a School of Art at Lambeth,⁶ and enlisted the aid of Cardwell, then Irish Secretary, in the science scheme.⁷ He was, as Vice President, very much in favour of increased estimates.⁸ He opposed the setting up of the "Committee on the Museums" in 1860 but was "well contented" with its outcome,⁹ and obtained the approval of Gladstone for Museum extensions.¹⁰ He was prepared to admit his ignorance of the Department's system.¹¹ "The system of payment on results" had "given an astonishing impulse to the spread of education in science throughout the country", he believed.¹² It was, however, Lingen, and not Cole, who received his support on the question of science teaching in elementary schools, as will be recorded,¹³ and he was also against the teaching of drawing there until the basic subjects were well taught. The adoption of the scheme of payments on results by the Education Department, in emulation of the Science and Art Department, at Lowe's prompting, will also be detailed.

On Lowe's resignation in 1863, H.A. Bruce¹⁴ was his successor. He was "in general agreement" with the Department's system,¹⁵ "pleased when the

1 Pch 11 April 1891

2 Cole MS Diary 4 October 1859

3 Ibid. 12 April 1860

4 Ibid. 5 February 1862

5 Ibid. 22 December 1859

6 Ibid. 15 December 1859

7 MS letter Cardwell to Lowe 27 February 1861 (Cole Correspondence)

8 Cole MS Diary 29 March and 12, 19 April 1860, 13 June 1863 and Hd. CLXXI (1863) 760

9 Cole MS Diary 21 June, 14, 24 July, 1 August 1860, MS letter Lowe to Cole 3 August 1860 and MS letter Gregory to Cole 10 July 1860.

10 MS letter Lowe to Cole 12 August 1860 and Cole MS Diary 13 August 1860

11 Cole MS Diary 13 May 1860, MS letter Lowe to Cole 3 December 1860 and Cole MS Diary 3 May 1862.

12 Hd. CLXVI (1862) 1530-1531

13 Section (g) (i) below

14 Biographical Appendix

15 Cole MS Diary 11 and 20 February 1865.

estimates passed unexpectedly,¹ and defended the Department in the "Soulages affair", and during the period when it was severely criticised for its part in the Paris Exhibition of 1867. Out of office, he used his influence to "calm down" a later Vice President, Lord Robert Montagu,² tried to influence the Treasury in the Department's favour,³ and "blew up Lowe for stopping buildings".⁴ He later returned as Lord President. The general agreement in the development of the Department's schemes of all three politicians meant that there were no radical changes in policy during their terms of office. Lowe's later opposition to an extension of its powers will be recorded.⁵

iii) Duke of Buckingham and H.T.L. Corry (Third Derby Administration)
(1866-1867)

There was some doubt "at Osborne" as to "how Cole would get on with the Duke",⁶ who was "the only man who ever put Lord Granville in a dancing passion".⁷ Cole did "get on": he stayed with him at his country house,⁸ and had the promise of his support in schemes of Sunday opening of Museums, which came to naught.⁹ Cole was told that the Duke had said that "Cole does not dispute with me, and can take a snubbing, but I have to look sharp at the end of a fortnight to see that the thing is not up again".¹⁰ While others believed that the Duke was "remarkable for his omniscient ignorance",¹¹ he accepted Cole's advice on estimates and obtained Disraeli's co-operation.¹² Redgrave "began to like him" and told Cole that his chief had "spoken highly of him".¹³ It was with regret that Cole heard of his resignation.¹⁴ He was not as diligent in business as he might have been,¹⁵ but Cole knew how to deal with a potentially irascible chief.

Corry was "very timid" at his first Board, which he took in the Duke's absence.¹⁶ He was, however, prepared to oppose his head on the Sunday opening

1 Cole MS Diary 2 June 1865
2 MS letter Redgrave to Cole 23 May 1867
3 Cole MS Diary 27 November 1867
4 Ibid. 19 January 1870
5 Chapters VII and IX
6 Cole MS Diary 20 August 1866
7 Ibid. 2 August 1866
8 Ibid. 21, 22 August 1866
9 Ibid. 7 November 1866
10 Ibid. 6 December 1866
11 Ibid. 21 February 1867
12 Ibid. 25 January 1867
13 MS letter Redgrave to Cole 4 March 1867
14 Cole MS Diary 5 March 1867
15 Ibid. 13 September 1866
16 Ibid. 2 August 1866

of the Bethnal Green Museum,¹ and put up a spirited defence of the Department over the Paris Exhibition in 1867, and in the only debate he took on the estimates.² The term of office of both men was short: they both made way for new men before the end of the administration.

iv) Duke of Marlborough and Lord Robert Montagu (1867-1868)
(Third Derby Administration and First Disraeli Administration)

Both the new heads were men of potentially dangerous calibre. Marlborough was "obstinate", Granville believed,³ Redgrave had heard "not a pleasant account of our new master"⁴; he was later described to Cole as "the worst man of business in the world ... who would upset the repair of a turnpike road"⁵ and Lowe believed that "he would never die of dignity"⁶. When Lord Robert Montagu,⁷ who eventually obtained the post of Vice President after three other candidates had been considered,⁸ was appointed, Redgrave thought that "at best he knows nothing, and what he does, objecting to"(sic).⁹ Bruce, the former Vice President, "asked the Duke to keep him in order."¹⁰ Montagu was "an unmitigated ass", Granville believed,¹¹ but Redgrave repeated Disraeli's view that "he is not a stupid ass, but a clever ass".¹²

In both their ways, however, the politicians seem to have fallen under Cole's spell, although each could at times be difficult. The Duke told Cole on one occasion that he, not the Secretary, was the judge of financial expenditure,¹³ he could, as will be noted, be "very cool" on the Whitworth scheme, he refused to accept Cole's advice on the employment of artists for Museum murals,¹⁴ and he gave him "the most severe reprimand" over the Universal Art Catalogue. At his first Board, however, he was "most pleasant".¹⁵ He told Cole that "the Museum was the best of its kind, and money would not be grudged".¹⁶ He later "passed many Minutes to the surprise of Macleod and Donnelly",¹⁷ and attempted to influence the Cabinet on increased aid for

1 Cole MS Diary 23 November 1866
 2 Hd. CLXXXIV (1867) 1568-1569
 3 MS letter Redgrave to Cole 6 March 1867
 4 MS letter Redgrave to Cole 8 March 1867
 5 Cole MS Diary 11 June 1868
 6 Ibid. 4 January 1869
 7 Biographical Appendix
 8 MS letters Redgrave to Cole 6, 8 March 1867
 9 MS letter Redgrave to Cole 15 March 1867
 10 MS letter Redgrave to Cole 23 May 1867
 11 Cole MS Diary 21 March 1867
 12 MS letter Redgrave to Cole 23 May 1867
 13 Cole MS Diary 12 August 1867
 14 Ibid. 10 June 1868 and MS note by Cole of 10 July 1868
 15 Cole MS Diary 21 March 1867
 16 Ibid. 31 March 1867
 17 Ibid. 14 August 1867

"Technical Instruction",¹ although he believed that it would be "wrong to initiate very expensive measures unless local exertions could be induced".² He asked Cole for advice on the appointment of Commissioners for a proposed Order of Merit: "he did not wish to go as low as industry, but I argued for it ... at last he said 'Oh well, I'll include industry'".³ After he left office, he told Cole "Disraeli would never have cut Art (purchases) like Lowe!"⁴

While Macleod reported Montagu's jealousy of Cole's superior accommodation in Paris during the Exhibition,⁵ and he once "seemed surprised that Trade Schools interfere with trade if they worked at all",⁶ relations between the Vice President and his officials seem to have been amicable enough. He attempted to make a contract between Cole and Samuelson,⁷ when the latter left for his Continental enquiries, in connection with his Committee, in 1867.⁸ He was co-operative on estimates,⁹ and allowed Cole to obtain the appointment of Iselin as Science Inspector, although he "wanted some barrister."¹⁰ As a member of the Samuelson Committee, he wished to include statistics to show the Department's progress in its Report, but was over-ruled.¹¹ The Department was "a great success" he said, and this was the reason for its increasing expenditure¹², and he stressed that it was teaching science which could be applied to trades, and not the trades themselves.¹³ He released the ire which he had not vented on the Department when he told a questioner that he "was not sitting with my arms folded, but I am responsible for the Paris Exhibition, the South Kensington Museum, the Charity Commissioners, cholera and the cattle plague".¹⁴

There seems to have been some lack of co-operation between the politicians: Montagu told Cole that "the Duke had been with him" on the abortive Conservative Education Bill of 1868, and then "threw him aside and went with Lingen".¹⁵ Together or separately, they could have had a very bad effect on the consolidation of the Department's system if their actions had lived up to the reputations which preceded them.

1 Cole MS Diary 15 November 1867 and 23 January 1868

2 Hd. CXCI (1868) 823

3 MS note by Cole 16 July 1868

4 Cole MS Diary 28 April 1869

5 Ibid. 19 June 1867

6 Ibid. 12 October 1867

7 Ibid. 31 August 1867

8 Engr. 30 August 1867

9 Cole MS Diary 7 and 30 December 1867, 28 May 1868

10 Ibid. 3 December 1867

11 S.C.S.I. xxix

12 Hd. CLXXXIX (1867) 1240

13 Hd. CXCI (1868) 178

14 Hd. CLXXXVI (1867) 815

15 Cole MS Diary 23 March 1868

v) Earl de Grey and Ripon (Robinson) and W.E. Forster (First Gladstone Administration) (1866-1873)

The part which Forster,¹ the Vice President, played in the development of a national system of elementary education was sufficient for the claim to be made that he was the "first effective Minister of Education."² His concern with, and effective oversight of, the Department were no less important. "His appearance is the worst thing about him", Granville believed.³ His general defence of the Department were consistently high. "It was not his business to check the demand for public education", he believed,⁴ and he told Cole that he would welcome a great agitation for Technical Education without it being attributed to him.⁵ The more he looked into Science and Art, the sounder he thought the action, he said to Cole later.⁶ Ripon also "wished to consider what could be done for Technical Instruction" and asked for a paper on the subject.⁷ Although he was "personally against Drawing" he was "not (against) Science and the Museum".⁸

Disraeli had forecast that "Cole's ~~post~~ to be cut down under new government; South Kensington will need friends in the new Parliament."⁹ It was not from the political heads of the Department that trouble came, but from Lowe, Cole's erstwhile chief and friend who was now Chancellor of the Exchequer. Both chiefs appear to have done their best to defend the Department against these attacks. Forster "would defend our estimates", believed that "increased expenditure was proof of virtue", "would always resist interference" and said that if Lowe altered estimates without consultation "then the Treasury must conduct the Department".¹⁰ "The Treasury thought more of saving than of educating people", he believed "... Lowe of 1869 abused Lowe of 1860" ... (and) "would make economy stink in the nostrils".¹¹ He was glad to have defended us ... even though he had got into a scrape ... and was "prepared to defend our estimates because we deserved credit for them".¹² "It must be seen that we do

1 Biographical Appendix

2 Wemyss Reid Life of W.E. Forster (London Chapman and Hall 1888) XI 435-468

3 Cole MS Diary 16 December 1868

4 Ibid. 16 December 1868

5 Ibid. 1 May 1869

6 Ibid. 26 November 1869

7 Ibid. 21 January and 10 February 1869

8 Ibid. 4 January 1869

9 MS letter Redgrave to Cole 29 October 1868

10 Cole MS Diary 8 January, 11 January, 5 February and 9 April 1869

11 Ibid. 10 May, 1869 and 26 June 1869

12 Ibid. 25 June, 26 June 1869.

not give in", he urged.¹ "We will have it out with the Treasury"² "we should take Treasury silence for consent ... to do our work as we could"³ Ripon resisted the appointment of a Treasury Committee "as he did not intend to have the Treasury as our overlookers".⁴ With Forster, he was prepared to pay the expenses of the official opening of the Bethnal Green Museum when the Treasury refused to sanction them.⁵ He intervened with Gladstone and returned in triumph to proclaim that a purchase vote would not be reduced, but that the Department would be merely "admonished".⁶

Despite their protestations, the political chiefs had to agree to a reduction of the total vote in 1869⁷ and 1870.⁸ (There was however a return to an increased vote in 1871⁹ and a steady but less rapid rise from that point.) Forster had to admit that "he would do more for Science but was prevented by Lowe."¹⁰ He was unable to prevent the transfer of responsibility for the erection of new buildings to the Office of Works, which was under another of Cole's enemies, Ayrton.¹¹ Ripon was "too soft" in his resistance to Lowe's "economy campaign", believed Huxley's friend, Hooker,¹² and Forster once told Cole that the Lord President had "murderous intentions against purchases."¹³

Forster's plans for elementary education, and Cole's views of these, are recorded later, but Cole must have felt disquiet when Forster announced to the House that "there must be care on pledges for Science since there will be new and additional demands for elementary schools".¹⁴ "I have too much to get for elementary education", was Forster's explanation of his reason for agreeing to a reduction in the Department's estimates in 1870.¹⁵ "The demand must be checked" he told Cole, when the Secretary wished to aid provincial Museums.¹⁶ When he was "much alarmed" at an increase in estimates in 1872, Cole showed him a copy of a speech in which the Vice President had expressed a desire for an increase in Technical Education.¹⁷

1 Cole MS Diary 24 March 1871

2 Ibid. 25 March 1871

3 Ibid. 28 April 1871

4 Ibid. 31 January 1871

5 Ibid. 15 June 1872

6 Ibid. 25 March 1870

7 Ibid. 15 January, 9 and 10 April 1869 and Hd. CXCVIII (1869) 200

8 Hd. CCIII (1870) 585

9 Hd. CCVIII (1871) 416

10 Cole MS Diary 26 October 1871

11 Ibid. 31 October 1869 and 18 February 1870

12 MS letter Hooker to Huxley n.d. July 1872

13 Cole MS Diary 26 November 1869

14 Hd. CXCVIII (1869) 217

15 Cole MS Diary 9 December 1870

16 Ibid. 5 December 1872

17 Ibid. 10 December 1872

Personal relations appear to have been good. Ripon was "very gentle" when a paper was sent by mistake to Lowe.¹ He seems to have made no response when Cole told him that he "hoped that national education would cost ten millions in a few years".² (The figure was actually reached in 1895, when the Education Department's expenditure totalled £9,600,000 and that of the Department £721,000. This of course includes the contribution by the School Boards). "A statue of Mr. Cole should be in the midst of our new buildings", he jocularly remarked at a Board in 1870. "It should be inscribed "the obedient servant of the Lord President", Cole suggested. Lowe, whose presence at the Board shows his determination that economy should be maintained, added dryly, "or who professed to be".³ Ripon tried to avoid controversy: he declined to act as Chairman of a public discussion on education, saying that he had "no wish to dance on a tight-rope."⁴ After the passing of the 1870 Act he believed that "the work of education leaves no time for other work."⁵

Both the political chiefs were of course involved in the question of Cole's retirement and the appointment of his successor, in which they ignored his advice, and they co-operated with Lowe on the scheme for the handing over of the Museum.⁶ Their good wishes on his retirement have been noted, as has been their defence of the Secretary in the Simkins case. While both were "timid" about the inclusion in the estimates of a sum for laboratories in the new Science Schools⁷ (which had not received full Treasury approval, as will be recorded) Cole found them at a Board in his last months of service "good humoured, indifferent, disliking responsibility and wishing me to do things without asking".⁸ Ripon gave up his post soon after Cole retired, saying "I can no longer serve without my King".⁹ Cole later tried to use Ripon's good offices, in obtaining a post for his son Harry¹⁰, and in defence of the Museum "against dilettantes".¹¹ Both chiefs appear to have done their best to protect the Department as a time when more radical interference could well have rendered more difficult of attainment the achievements of that period.

1 Cole MS Diary 16 March 1869

2 Ibid. 6 May 1869

3 Ibid. 25 January 1870

4 MS letter Ripon to Cole 3 February 1871

5 Cole MS Diary 26 July 1870

6 MS letter Donnelly to Huxley 14 August 1873

7 Cole MS Diary 11 December 1872

8 Ibid. 28 November 1872

9 MS letter Ripon to Cole 3 August 1873

10 MS letter Cole to Ripon 28 August 1873

11 MS letter Cole to Ripon 3 June 1880.

g) Relations with the Education Departmenti) Lack of co-operation in science teaching schemes

As Playfair's departure became imminent, Cole wrote to Lingen and discussed "science general and science technical".¹ This could have been an attempt to introduce the teaching of the subject into the primary schools. (The general deficiencies in the basic education of the population would long continue to hamper wider progress,² ~~It~~ was not until after the passing of the Education Act of 1870 that these would begin to be remedied, with a consequent rapid increase in the numbers of students undergoing further education). As the discussions on the 1859 science scheme went on, Cole made an enquiry of Lingen, who initially felt "there would be no difficulty in examining science teachers in their Office"³ meaning, presumably, in the Training Colleges. This was the limit of Lingen's co-operation. "We were not received with open arms by the Primary Division"; Cole said publicly later.⁴ For once, this was an understatement. Not only did Lingen oppose any schemes to introduce science teaching into primary schools, but he attempted to restrict the employment of primary teachers in evening classes, and to forbid the use of elementary school premises.

"State aid to promote science in elementary schools ... was not to be given, and no master with pupil-teachers should be allowed to teach in Science classes," the Board decided.⁵ When a master in an Elementary School asked if he would be entitled to payment on his Department Certificate under the 1859 scheme if he taught Chemistry to a school class, Lingen noted on the letter "Many persons (I for one) do not think that science instruction is the best subject to encourage for children under eleven years of age". He went on to say that if Science were encouraged "why not Music or Social Studies? Elementary fund payments are quite sufficient." Lowe initialled Lingen's note with the words "I entirely agree".⁶ As a result, Cole drafted a Minute which declared "The Science Minute is for adults only ... for more advanced work than the Education Department ... which is not to be duplicated ... and not to be given in day schools."⁷

1 Cole op. cit. I 310

2 Engr. 3 June and 23 November 1859

3 MS letter Lowe to Cole 24 June 1859

4 R.C.S.I. A. 183

5 Cole MS Diary 26 January 1860

6 MS.M 11.22 (4 April 1860)

7 Ibid. May 1860

"National School premises could not be used for classes",¹ but teachers overcame the "pupil-teacher" restriction by handing over the formal responsibility for these "apprentices", to their assistants², and most of the candidates who qualified to earn payments from the Department in the first special teachers' examination already held the primary certificate.³ "Lingen beaten: wanted to stop any connection of Science with elementary education", Cole recorded, after a Board, at which Lingen was present, removed the ban on the use of school premises.⁴ (206 school buildings were in use for evening science classes by 1869⁵). Many evening classes developed, Iselin thought, as a means of keeping in touch with old pupils,⁶ but a much more cogent reason must have been the teachers' desire to earn extra income at a time when the Revised Code of 1862 had the effect of reducing their earnings.⁷ The ban on teachers with pupil-teachers was removed in 1865.⁸

The Department, however, met with a persistent refusal to extend science teaching to the day hours of elementary schools. When Donnelly urged the removal of the restriction as early as 1861, Cole noted "Refer Science Directory".⁹ This recommendation was repeated by Donnelly in 1867, and he was quite prepared for payments to be made through the Education Department,¹⁰ but there was still no progress when the Samuelson Committee met in 1868. After Cole had made this point, and urged the development of elementary science teaching,¹¹ the Committee recommended that the system of payments should be extended to day schools under the Education Department.¹² "Only in Drawing is there any connection between the Education Department schools and the Science and Art Department", Lingen told the Committee.¹³ "What science instruction has been achieved has been put through in the teeth of opposition from the Education Department," Huxley said four years later. There had been "practical antagonism" and direct opposition. "The present situation is an anomaly which could only exist in our own country", he continued, but he believed that Donnelly's suggestion for Department payment through the

1 D.S.A. 7th Report 35

2 D.S.A. 11th Report 55

3 D.S.A. 7th Report 8

4 Cole MS Diary 21 August 1862

5 D.S.A. 16th Report 57

6 D.S.A. 11th Report 58

7 Table XXVI

8 D.S.A. 13th Report 35

9 MS.M 13.130 (April 1861)

10 S.C.S.I. Appendix XI (Memorandum of 12 December 1867)

11 Ibid. A.176 and Memorandum Appendix XII

12 Ibid. ix

13 Ibid. A.6898

Education Department was unworkable, because "it would be extremely undesirable to have one person looking after three fourths(of the instruction) and somebody else looking after the other quarter".¹

The Royal Commission on Scientific Instruction urged that the "two Departments should work in harmony" in the field of science teaching.² Cole agreed with Huxley that it would be better if science instruction in the elementary schools were under the supreme authority of the Primary Department,³ but Donnelly clung to his belief in Departmental examination and Education Department payment, and thought "harmonious action" was possible.⁴ Although there was some agreement that relations had improved with the departure of Lingen,⁵ several witnesses referred to the lack of co-ordination.⁶ "The two Departments interfere with each other's work and pull against one another", was a complaint which summarised much current opinion.⁷ While the numbers of children attending evening classes organised by the teachers increased to the point where restrictions had to be placed on their entry,⁸ and, as will be recorded, the Training Colleges increasingly availed themselves of aid,⁹ Science continued to occupy "a nocturnal and somewhat surreptitious position"¹⁰ because of the lack of co-operation.

ii) An extension of payment on results

The field in which the Department, through Cole, was to have the most far reaching effect on the policy of its sister Department was in the discussions which led up to the introduction of the Revised Education Code of 1862, and its system of payment by results in the primary schools. (It has been noted that the Department invariably preferred to talk of payment "on" results). Lowe, the Vice President, was in favour of a more "efficient" system of instruction in the elementary schools, because on his visits to primary schools near his home, he had been struck by the generally low standards,¹¹ and because of the recommendations of the Newcastle Commission on the question. In May 1861 Lowe asked Cole to "prepare a scheme for paying for results on reading, writing and arithmetic", and the Secretary prepared such a paper, after discussions with

1 R.C.S.I. AA. 314-354

2 Ibid. xxviii

3 Ibid. AA. 5975-5976

4 Ibid. AA. 6089-6096, 6463-6466

5 Ibid. AA. 8365-8366 (Sandford) A. 354 (Huxley)

6 Ibid. A. 1952, 2039 (Applegarth) AA. 2279-2287 (Shore) A. 8286 (Robinson)

7 N.A.P.S.S. 1870 Report 335

8 D.S.A. 19th Report 13

9 Chapter XI section (C)(b)

10 R.C.S.I. A.314 (Huxley)

11 Lord George Hamilton op. cit. 157

Donnelly.¹ This has, unfortunately, not survived. The Department had already pointed out that its own system had been in operation for some time, "and it may be useful to those who advocate the applicability of a system of payments on results to general education".²

While "Lingen preferred inspection",³ and Kay-Shuttleworth was against any scheme of payments,⁴ Lowe was "disposed to try an experiment", and Granville gave Cole £10 for a trial. Iselin and Donnelly assisted Cole when he "visited the Brompton School about examinations", and he carried out further experiments at the village school near his country home.⁵ Late in September, Lowe told Cole that Lingen had made a mistake in making a Minute on "results" operative before it had been discussed by Parliament,⁶ and he had to apologise for this later to the Commons.⁷ "The principle is perfectly right", Cole assured Lowe just before his Commons speech, but he feared it would be "smothered in red tape details", and offered the advice of an arch-pragmatist when he said "don't be pledged to any particular mode of working it. Try if need be half a dozen modes".⁸

In his Commons speech, in addition to the celebrated "If it is not efficient, it shall be cheap ...", Lowe used phrases which might have come from any of the Department's Reports of the period: "The master ... will be able to appreciate the results of his own labour ... the public will know what they are getting for their money ... Parliament will be able to regulate at their pleasure".⁹ The lack of precise information on Cole's recommendations makes for difficulty: some of his "experimental" school work involved "examination papers",¹⁰ but the scheme as adopted involved payments on the results of personal examination rather than on nationally taken written examinations. In later years, Lowe was prepared to "second a motion to abolish the system ... because the idiots who succeeded me piled up class and special subjects ... resulting in cram and superficiality", but he still maintained that the "three R's" were the "subjects which can definitely be tested".¹¹ "There was nothing to prevent

1 Cole MS Diary 9, 10 and 13 May 1861

2 D.S.A. 8th Report 10

3 Cole MS Diary 13 June 1861

4 Ibid. 12 May 1861

5 Ibid. 17 May, 14, 18, 24 June, 8, 16, 17, 19 September 1861

6 Ibid. 23 September 1861

7 Hd. CLXV (1862) 191

8 MS. letter Cole to Lowe 10 February 1862

9 Hd. CLXV (1862) 191-242

10 Cole MS Diary 17 September 1862

11 Hamilton op. cit. 157-158

the admission of any other branch of useful knowledge ... if it could admit ... of precise and accurate measurement ... other knowledge is useful, but it is not so useful", he reminisced to his old subordinate, Lingen, twenty years after.¹ The fact that elementary school "science" cannot have been seen as "useful knowledge" for children accounts for the Education Department's opposition to its development in "their" schools.

One consequence of the introduction of the Revised Code, which has been recorded, was that subjects other than the basic skills were neglected. "Mr. Lowe objected to paying for drawing until reading, writing and ciphering were well taught", but he was over-ruled by Granville.² Objections by Lingen were also ignored³, and the Minute of October 1862,⁴ which actually extended Departmental aid, has been noted as an example of the way in which the two Departments could take contrary action in the same field. (It could be argued that both Departments were motivated by a desire for "results" which bore some relation to expenditure.) Science teaching, too, virtually disappeared from the elementary schools,⁵ and this was noted with concern by Cole and Donnelly,⁶ whose comments on the topic to the Samuelson Committee have been noted. The Code was eventually amended to allow payment on science as a "special subject",⁷ but the Department was still allowed no share in its teaching in day schools under the Education Department.

iii) Personal relations

Relations between the two Departments were fraught with danger in the early period, in the fact that both Civil Service heads were "strong personalities" "Lingen enraged" Cole noted, without further detail, in 1858.⁸ "Lingen kept him and Lord Granville in order", Lowe told Cole, and added that he was "a capital officer, though temper not of the sweetest".⁹ Lowe saw Lingen's "bad temper" as "an advantage because it keeps people in order".¹⁰ "Mr. Lingen is quite as powerful as Mr. Lowe, and quite as offensive ... it is from (him) that all sharp snubbing replies proceed", believed one periodical.¹¹ "It was a

1 A. Patchell Life and Letters of Viscount Sherbrooke (London Longmans Green 1893) II 217 (Letter of 17 March 1882)

2 Cole MS Diary 8 March 1862

3 Ibid. 17 July and 1 August 1862

4 D.S.A. 10th Report 53

5 Engr. 2 and 23 August 1867

6 Cole MS Diary 21 January and 5 February 1865, 11, 16 and 23 December 1867

7 R.C.S.I. A. 8367 (Sandford) and A. 7982 (Cromwell)

8 Cole MS Diary 20 January 1858

9 Ibid. 19 June 1862

10 Ibid. 16 February 1864

11 Saturday Review 15 April 1864.

pity that Lingen's skin was not so thick as mine and his temper so bad", Cole noted that Bruce had told him.¹ "Lingen would agree to a principle, and then not apply it in his office", Granville believed,² and Cole was warned by Buckingham to take care with the preparation of a Memorandum on the "merger", "as Lingen would be sure to pick a hole if he could".³ After Lingen became Permanent Secretary to the Treasury, Childers told Cole that he was "quite unfit to be Secretary ... and gave great trouble".⁴

Lingen raised no objections, but rather helped in the transfer of J.B.Rundell to the Department in 1864, pointing out that he was "of a scientific turn ... with Society of Arts Certificates", and saying that he was "sorry to lose him".⁵ (Rundell retired as a Clerk Upper Division in 1888). Cole noted that he defended the Department's estimates in 1868,⁶ and discussed the relations of his Department with the Treasury and the Audit Office in the following year. ("Much like our own", noted Cole.⁷) It must have taken great tact on the part of political chiefs, to preserve good relationships between their chief officials, although Cole could still say to Salisbury, his former chief, in 1865, that "I thought the Committee of Council had worked well with the Department in the past".⁸

Relations cannot have been improved by Cole's attempts to take over the responsibility for the encouragement of Music from the "primary" department. This was linked with his wider schemes. Granville agreed that the Royal Academy of Music should become a Departmental institution,⁹ but negotiations for the take-over ended in failure.¹⁰ (Cole then promoted a "National Training School of Music") Ripon and Forster seemed to agree with Cole's plans for the transfer of music from the Education Department,¹¹ but the subject never became the responsibility of the Department, although Cole continued to agitate for its transfer after his "retirement".

iv) The Education Act of 1870

The "deficiencies" in primary education were commented on as a bar to progress by several witnesses before the Samuelson Committee.¹² A longer period

1 Cole MS Diary 5 February 1865

2 Ibid. 16 March 1863

3 Ibid. 19 February 1868

4 Ibid. 1 January 1873

5 MS letters Lingen to Cole 5 January and 10 February 1864

6 Cole MS Diary 31 May 1868

7 Ibid. 27 May 1869

8 Ibid. 22 March 1865

9 Ibid. 7 February 1866

10 D.S.A. 14th Report 184

11 Cole MS Diary 8 March 1871 and 20 November 1872

12 S.C.S.I. A.382 (Cole) AA.1407-1409 (Iselin) A.3761 (Moseley) A.4552 (Jarman) AA.5039 & 5096 (Sales) A.4673 (Mundella) A.5352 (Angell) A.8271 (Buckmaster)

of time in the primary schools was encouraged by the Department with the introduction of a system of scholarships to aid parents with maintenance costs of their children from 1868.¹ The real need, however, was for the development of a national system of elementary education which would involve local financial support. Forster kept Cole informed of the progress of his Education Bill which eventually became the Education Act of 1870. Lowe and Lingen "were strongly for it".² Cole declined Forster's offer when the Vice President said that he could see a copy of the proposals, since his own views were opposed to those of his chiefs, and he "might unwittingly betray a confidence".³ ("Compulsory education is impracticable and fees are desirable", thought Cole)⁴ It was left to the School Boards to decide on these issues in their areas.⁵ While Cole noted that Forster's introduction in the House was "very effective and much cheered",⁶ some Liberals believed that Forster had "sold the pass" when he allowed the voluntary system to continue,⁷ and he later showed Cole a letter which "Likened him to Judas Iscariot ... had broken up the Liberal Party."⁸ One consequence of the passing of the Act was that there was some reluctance to allow the Department's expenditure to grow at a rapid rate, as has been noted, since "money was needed for elementary schools", but its immense influence on the Department's own development, by helping to produce "educated" children who, as students, used the Department's services, will be later detailed.⁹

v) An attempted merger

Cole's approaching retirement provided the opportunity for a more complete merger of the two Departments. In 1868 a scheme was drafted by Lingen which proposed that Sandford,¹⁰ his successor as Head of the Education Department, should be Secretary of the combined Departments.¹¹ While Marlborough, the Lord President, was initially in favour of "the Departments remaining quite separate"¹², there were further discussions within the Department and with Sandford.¹³ The whole question of the merger was delayed by the

1 D.S.A. 15th Report 2

2 Cole MS Diary 14 December 1869

3 Ibid. 4 January 1870

4 Ibid. 30 January 1870

5 Wemyss Reid Life of W.E. Forster 479

6 Cole MS Diary 17 February 1870

7 Wemyss Reid op. cit. 473

8 Cole MS Diary 26 July 1870

9 Chapter v section (h)

10 Biographical Appendix

11 Cole MS Diary 17 February 1868

12 Ibid. 19 February 1868

13 Ibid. 23 November and 16 December 1870, 14 July, 1871, 3 April 1873.

protracted negotiations over Cole's retirement and the succession. The final outcome, as will be noted later, was that Sandford became the Civil Service Head of the two Departments, while Macleod exercised special responsibility for "South Kensington". As will be suggested later, the period of Sandford's nominal control was not a successful one.¹

h) Summary of the period

In some ways the decade from 1859 to 1868 was the most important in the Department's history. This period saw the full inception of the scheme of payment on results in both Art and in Science and its consolidation in the face of opposition. There was continuing growth of the central institutions. Schemes were developed, particularly in the training of science teachers, to meet the increasing demands of the times for improved industrial education, although the Department continued to hold to its insistence on the study of "principles" rather than "practice", and a lack of co-operation from the Education Department hindered progress in the field of full-time education. During this time, J.C. Robinson left the Department, and Donnelly, who was to be its Head in its final years, joined it. The years after 1868 to the end of the period under review saw a gradual extension of all these developments.

1 Chapter IV sections (b) and (h)

CHAPTER FOUR

AN EMBRYO MINISTRY OF SCIENCE

(1873 - 1882)

- a) Additional Functions
- b) The chief officials and their policies
 - i) Administrative pattern
 - ii) General relationships
 - iii) Cole's intervention
- c) Institutions and Instruments
- d) The development of facilities in the teaching of Art
- e) The development of facilities in the teaching of Science
- f) The movement for Technical Instruction
- g) The influence on Departmental policy of political chiefs
- h) Relations with the Education Department
 - i) Central Administration
 - ii) Work in elementary schools
- i) Summary of the period
- j) The "Founding Fathers" : Cole and Redgrave
 - "King Cole"
 - i) A family business
 - ii) The Royal Connection
 - iii) Parliamentary friends and foes
 - iv) The "Soulages Affair"
 - v) Financial acumen?
 - vi) General character
 - Richard Redgrave

a) Additional functions

At this period, the Department took on certain functions which would suggest that it saw itself, or was seen by others, as the "Ministry of Science" which was recommended by the Royal Commission on Scientific Instruction in its Eighth Report.¹ Although Donnelly was not in control of all the Department's activities, he widened the field of his responsibilities as Director of Science.

For a time, the Department acted as the administrator of government grants in aid of scientific research, which had also been recommended by the Commission,² taking over equipment purchased by researchers on the completion of their activities.³ "Few real men of science"⁴ favoured the method, charged the Engineer, because they feared "corruption by the connection with existing government departments of a quasi-scientific nature whose deeply interested labourers will be workers for their own benefit".⁵ Engineering noted the arrangements without comment.⁶ Recipients in the first year of the scheme included Joule, Armstrong, Crookes and Roscoe: only half of a £4,000 grant was expended, and the balance was "returned to the Exchequer".⁷ The connection with the Department lasted for only five years: it was terminated in 1882, and the grant was then administered by the Royal Society.⁸

The Fourth Report of the Royal Commission recommended the establishment in the Metropolis of a Science Museum.⁹ The Department took the lead by organising a meeting at South Kensington in February 1875, with the Lord President, Richmond, in the Chair.¹⁰ It was subsequently announced that an International Loan Collection of Scientific Apparatus would be organised for 1876,¹¹ with the Department responsible for the arrangements.¹² "The Department was going ahead with its plans" in January 1876.¹³ Nature reported meetings in Berlin, on the Prussian contribution, with Hofmann as President. It was announced there that the Department would bear all the costs of transport and display.¹⁴

1 R.C.S.I. 47 viii [P.P. (1875) XXVIII] and Engr. 20 August 1875

2 Ibid. 47 vi

3 Ibid. and D.S.A. 24th Report 6-9

4 The word "scientist" did not receive general acceptance until later. As late as 1882 Nature objected to the word as "an Americanism". (Nat. 10 August 1882)

5 Engr. 9 March 1877

6 Engg. 29 June 1877

7 D.S.A. 25th Report xi and 14-15

8 D.S.A. 29 Report xxi

9 R.C.S.I. 13.82 and 14.93 [P.P. (1874) XXII]

10 Nat. 18 February 1875

11 Ibid. 13 May 1875

12 D.S.A. 24th Report 10

13 Cole MS Diary 17 January 1876

14 Nat. 6 and 20 January 1876

The Times, reported Nature, congratulated the Government on its initiative! The latter journal went on to predict that the Exhibition would be "brilliant",¹ and reported that preparations were in a "forward state".² The Athenaeum, however, cast doubts on the project, and queried the value of such collections, except to instrument makers. When the Exhibition opened in May, Donnelly, Owen, Sandford and Lockyer were among those presented to the Queen, and Nature talked of the Exhibition as a "great success".³ (Punch made only one comment on the Collection, when it asked why Napier's Bones were not in their proper resting place.⁴) Engineering saw the display as "interesting"⁵, but the Engineer was avowedly critical. It said that the collections were "heaped together", and attacked an "incomplete and misleading catalogue". It saw the Department's only end as "the aggrandisement of already bloated collections".⁶ The Athenaeum joined in criticism of the catalogue.⁷

The Department did all it could to popularise the Exhibition, and organised evening lectures by prominent scientists, to which science teachers were particularly invited.⁸ In late December 1876 it was announced that the Exhibition would close at the end of the year⁹ as the funds provided were exhausted.¹⁰ It was later stated that a total of 275,000 people had visited it.¹¹ The Athenaeum, doubly wise after the event, said that it had been alone in predicting that the Exhibition would be "a farce when it was first mooted". It contrasted the initial plaudits of the rest of the Press with their "dryness" when it was closed.¹² The Engineer returned to the attack on the catalogue and its blunders.¹³ The Athenaeum suggested that the cost to the State would never be known, and said that the figure of £25,000 which it had heard quoted was "much too great for something which had been neither interesting nor amusing".¹⁴ (As late as 1878, the Engineer attacked the scheme as "public money recklessly thrown away" when it deplored the Third Edition of the catalogue, which had just appeared, as "worthless as any other".)¹⁵

1 Nat. 2 March 1876
 2 Ibid. 23 March 1876
 3 Ibid. 18 May 1876
 4 Pch. 10 June 1876
 5 Engg. 12 May 1876
 6 Engr. 21 July 1876
 7 Ath. 1 July 1876
 8 Nat. 25 May 1876
 9 Ibid. 28 December 1876
 10 Ibid. 4 January 1877
 11 D.S.A. 24th Report xv
 12 Ath. 6 January 1877
 13 Engr. 19 January 1877
 14 Ath. 21 July 1877
 15 Engr. 17 May 1878

The Department, in its first public display under the new regime, had not exactly covered itself with glory. Cole suggested that Sandford was not a keen supporter of the idea, and that Owen proved to be an inefficient administrator. He criticised the arrangement and "lack of popular appeal" to Donnelly.¹ The truth would appear to have been that the Exhibition was arranged in too great a hurry, as a bid for control of the projected Science Museum. It was displayed neither on a "subject" nor chronological basis. Leading scientists of the day, including Abney,² and others, including Cole, Samuelson and Kay-Shuttleworth,³ memorialised for a "permanent Science collection" during the period of the Exhibition. Hooker suggested the Patent Museum collection as a nucleus,⁴ and he was supported in this by Wood of the Society of Arts.⁵ For a time, the relative failure of the Exhibition threatened to make these plans a "dead leaf".⁶ The Athenaeum said in early 1877 that the majority of the memorialists had withdrawn their support.⁷ Donnelly, in particular, was not disheartened. The scheme for the development of the Science Museum was to be a feature of the next period, although a separate building was not provided during the Department's existence.⁸

The Eighth Report of the Royal Commission recommended the establishment of a State Observatory of "Solar Phenomena".⁹ The transfer from the War Office to the Science School of Norman Lockyer, the Editor of Nature, to whom the possible connection between sun spots and meteorology had been a matter of interest for some time, took place in 1876, as a result of a deputation from the British Association to the Lord President.¹⁰ Lockyer was given facilities to assist him in his observations: his appointment was seen by Galton and Playfair as a "possible job", Donnelly, who became his good friend, told Cole.¹¹ Lockyer was later assisted by a Committee formed in 1879, of which Donnelly was a member, to aid in the collection of material, in the publication of researches, and in the initiation of projects. The preliminary Report of this Committee suggested that good work was being done.¹² The

1 Cole MS Diary 15 April 1876

2 Ath. 1 July 1876

3 D.S.A. 24th Report 3

4 Engr. 28 July 1876

5 Nat. 24 August 1876

6 Engr. 27 July 1877

7 Ath. 13 January 1877

8 Chapter VII sections (c)(iii-iv)

9 R.C.S.I. 47 iii [P.P. (1875) XXVIII]

10 D.S.A. Calendar 1893 62

11 Cole MS Diary 5 March 1876

12 Nat. 13 May 1880

Department sponsored expeditions for the observation of solar eclipses to Egypt and to the South Pacific,¹ and the Committee remained in connection with it for the rest of the century. These aspects aside, it was of course in the field of scientific instruction that the Department made its major contributions.

b) The chief officials and their policies

i) Administrative pattern

The outcome of the negotiations on the question of the reorganisation on Cole's retirement was that Sandford became the Civil Service Head of both the Department and the Education Department, with Macleod responsible for "South Kensington" and Donnelly in a subordinate position as Director of Science. Donnelly had supporters in Cole, Huxley and J.C. Hooker.² The list of appointments was published just before the First Gladstone Ministry went out of office. Nature gave Donnelly's appointment as "Director of Schools of Science and Art", and ranked his name before that of Macleod.³ This title was especially requested by Donnelly in a letter to Aberdare, the Lord President who succeeded Ripon for the last few months of the administration, but Sandford substituted the title of "Inspector General of Schools".⁴ Cole counselled patience,⁵ and both he and Huxley advised Donnelly to accept instead the post of "Director of Science", even though this meant that he would have to send Minutes through Macleod, so long as he retained the right of access to the political chiefs.⁶ Donnelly's acceptance letter to the Lord President, laying down these terms, was "softened" by Cole.⁷

Donnelly was assisted in the Science division for most of the period by Cole's son-in-law Bartley,⁸ who, in addition to his income from his official duties, was involved in private concerns which included a "Penny Bank" and a scheme to provide tenements for the poor. These outside activities were "queried by My Lords" in 1874.⁹ Bartley first told Cole that he had parliamentary ambitions in 1879.¹⁰ Early in 1880 an order was issued which threatened dismissal to officials who spoke at political meetings.¹¹ Bartley's resignation followed: he was unsuccessful at his first attempt to enter Parliament,¹² but

1 D.S.A. 29th Report xxii and 31st Report xxii

2 MS letter Hooker to Huxley 19 December 1873

3 Nat. 19 February 1874

4 Cole MS Diary 20 and 24 February 1874

5 Ibid. 25 March 1874

6 Ibid. 13 June 1874

7 Ibid. 15 June 1874

8 Biographical Appendix and Section (j)(i)

9 P.M. K 2. sec. 169

10 Cole MS Diary 5 February 1879

11 D.S.A.O.B. 31 January 1880

12 Cole MS Diary 12 February and 1 April 1880

later became a Conservative M.P., and was sometimes a defender, and sometimes a critic of the Department in the House. Cole talked with Donnelly about the possibility of his son, Alan,¹ as a successor to Bartley,² but the post was obtained by Iselin. William Abney, F.R.S. and Captain R.E.,³ joined the Department as Inspector of Science Schools in 1877, after service as a part-time Inspector. The following year, the War Office was informed that his recall to his Corps would "inconvenience the public service".⁴

Cole was succeeded as Director of the Museum by Philip Cunliffe Owen.⁵ As Redgrave's retirement approached, Donnelly was asked by Sandford to "sound" Poynter on the succession to the post of Art Superintendent, and the artist accepted.⁶ Poynter, who retained the Slade Professorship, and wished, as had Redgrave, "time to carry on with his Art"⁷ seems to have kept out of feuds within the Department. He announced when he retired that it was because he "wished to give more time to his painting"⁸, and he was succeeded by Thomas Armstrong.⁹ (When he dined at Cole's with Donnelly and his successor, he was "very jovial", Cole noted).¹⁰

ii) General relationships

It should perhaps be stressed that a one-sided picture of relationships is presented by the fact that the only available "private" comments are those of Cole and Donnelly, who were by no means disinterested parties, but signs of stress were not long in appearing. Macleod's "folly" in wrongly drafting a Science Minute, and in promising a reduction in estimates before they had been discussed by the Board, were soon reported by Donnelly to Cole.¹¹ The personal tragedy of the death in child-birth of his first wife,¹² and what must have been anxiety over the prolonged negotiations on the recall to his Corps, in which Macleod adopted delaying tactics¹³, added to his disappointment over the succession, almost caused Donnelly's resignation. He was hurt when the Lord President did not accept his advice on an appointment to Dublin, and told Cole of the subsequent "bust-up" which he had predicted.¹⁴ "Brains always win in

1 Biographical Appendix

2 Cole MS Diary 8 February 1880.

3 Biographical Appendix

4 P.M. VII. 63

5 Biographical Appendix

6 Cole MS Diary 8 and 15 August 1875

7 .D.N.B.

8 Ath. 30 July 1881

9 D.S.A. 29th Report xxiv

10 Cole MS Diary 17 March 1882

11 Ibid. 11 November 1873

12 Ibid. 14 December 1873

13 Ibid. 21 March 1874 and 20 March 1875

14 Ibid. 11 October and 14 November 1874

the end", Huxley told Donnelly when he advised him not to resign,¹ and the advice was obviously accepted.

Cole's continued intervention in the affairs of the Department, detailed below,² meant that his son, Alan, and Donnelly, suffered by association. Donnelly had to withdraw an offer to prepare a paper on Cole's favourite "Domestic Economy" for discussion at the Society of Arts, because "My Lords" forbade the connection.³ Alan was reprimanded by Macleod in 1874 for writing a letter to the press on reproductions,⁴ and a Treasury letter on the subject of such communications, signed by Lingen, was published in the Orders the following year.⁵ An Order in 1876 forbade approaches by officials to M.P.s with requests for promotion.⁶ In 1878 Alan read a paper to the Society of Arts in which he criticised the absence of government encouragement of Music.⁷ It was "impertinent in a public servant to comment on the Code" and "publication of the paper "would be harmful" to his "name and official prospects", Sandford told him in a letter.⁸ The lesson must have been learned: a reviewer of Henry Cole's autobiography, published posthumously and edited by Alan and Cole's unmarried daughters, contrasted "the vigour of Cole's pen with the careful and cautious chapters written by his children".⁹

Others were dissatisfied. Owen was determined not to allow Macleod to communicate directly with his own subordinates in the Museum, and believed that he had Sandford's support against the Scot.¹⁰ "You and I would not have liked our views and opinions doubted by the Lord President through a third party", Redgrave told Cole, after he had retired.¹¹ Negotiations with Whitworth,¹² who wished to bequeath further funds,¹³ seem to have been badly mishandled. He received a "snubbing answer" to his initial offer, but Donnelly intervened at Cole's request, and the outcome was a substantial bequest,¹⁴ (His ~~final~~ will, however, revoked previous Codicils and gave his executors power instead "to aid Science and Art as they wished".¹⁵)

1 Cole MS Diary 13 November 1874

2 Section (b) (iii)

3 Cole MS Diary 20 December 1876, 17 January 1877 and D.S.A.O.B. 22 January 1877

4 Cole MS Diary 17 March 1874

5 D.S.A.O.B. February 1875

6 Ibid. February 1876

7 Nat. 11 April 1878

8 MS note by Alan Cole 12 June 1878 (Cole Correspondence)

9 Nat. 5 February 1885

10 Cole MS Diary 10 October 1874 and 27 January 1875

11 MS letter Redgrave to Cole 15 February 1878

12 Chapter XII section(d)(iii)

13 Cole MS Diary 18 February 1876

14 Ibid. 29 March 1876 and 22 November 1877

15 Nat. 17 March 1887

Sandford was "very obstructive" and "timid" over the Science Exhibition, and "fanned the fire between Lord President and Vice President," Donnelly told Cole in 1876.¹ "Alan was amused at the chaos in the Office, where all correspondence has to be conducted through Macleod".² By 1877 Donnelly was "bitter about Sandford for untruthfulness and deceitfulness".³ From that nadir, there would appear to have been an improvement, or at any rate the achievement of a "cold neutrality".

In November 1881 Redgrave told Cole that he had heard that Macleod was about to resign.⁴ Later in the month, Alan informed his father that Donnelly had been authorised to prepare the estimates.⁵ When Macleod did retire, at the age of 70, in December, after 28 years service, there was some delay before Donnelly was appointed his successor,⁶ as the "head of South Kensington", to begin the reign for which he had been Crown Prince for so long.

iii) Cole's intervention

"You do not enjoy retirement", his old friend Redgrave told Cole⁷, and the last years of his life saw no diminution in his energies, particularly in connection with the affairs of what he still saw as "his" Department. His interest shaded at times into direct intervention. He continued to attempt to obtain what he considered to be a "rightful place" for Donnelly, offering to give Aberdare, the newly appointed Lord President ("H.A. Bruce just made") any information he "needed on the administrative officers".⁸ He drafted a letter, which he did not send, at the Engineer's request,⁹ congratulating Aberdare on Donnelly's appointment as Director for Science.¹⁰ His Diaries show that his son, Alan, and Donnelly, continuously gave him information on the affairs of the Department. While he noted that he had read a Minute on the use of the Education Library ("not a place for study")¹¹ when he visited the Museum in 1875, he was later very indignant at a suggestion from Mundella that he was being shown Minutes by Donnelly.¹² His intervention in these and other matters, already recorded, must have been a source of some embarrassment to his

1 Cole MS Diary 6 and 13 February 1876

2 Ibid. 14 December 1876

3 Ibid. 15 January and 2 April 1877

4 Ibid. 5 November 1881

5 Ibid. 20 November 1881

6 D.S.A. 29th Report xxiv

7 MS letter Redgrave to Cole 27 August 1875

8 Cole MS Diary 16 August 1873

9 Ibid. 31 January 1874

10 Cole op. cit. I 212

11 Cole MS Diary 31 December 1875

12 Ibid. 6 March 1881

successors, but it hardly seems to justify the treatment he received at their hands. He was prevented from making Sunday visits to "his" Museum by the direct orders of Macleod¹, and the Scot doubted the propriety of his appointment to one of the Committees for the 1876 Loan Exhibition.² When his offer of a bust of himself, purchased from his testimonial funds, was refused, he railed against the ingratitude of Macleod, Cunliffe Owen and Sandford, but had "got so hardened to blows ... that I can truly say I am now indifferent. Played dummy whist in the evening".³

His general reaction to what he regarded as neglect, or worse, was to point out inadequacies whenever he could. "There was no Art knowledge at the Museum, Macleod was incompetent, and Sandford could not do the duty", he told Cunliffe Owen.⁴ Macleod's mistakes in his early days in the Department were related to Granville and his friend Thring,⁵ and he told Matthew Arnold that "Sandford was not very capable".⁶ He endeavoured to influence the Secretary, however, by suggesting that "Donnelly should replace Macleod at once",⁷ and in the last week of his life, told him "of a bronze which had been refused by Berlin at £100 and purchased by Kensington for £1000".⁸ He "deplored repression at the Museum" to King, the Keeper of the Education Library.⁹ While Donnelly gave him prior warning of Redgrave's retirement,¹⁰ Sandford revealed it to Cole a week later "without a word of his successor."¹¹ He therefore advised Poynter, who was appointed, "to consult Donnelly when in difficulties".¹²

In 1877 he attacked Sandford publicly, if anonymously, in the Whitehall Review, when his brother, Colonel Sandford, a former Addiscombe cadet,¹³ was knighted for his services in connection with an Exhibition at Philadelphia. He implied that the Colonel owed this honour, and the post as temporary successor to Cunliffe Owen at the Museum, entirely to his brother's influence, and "would have to be fetched across Hyde Park by mounted policemen if an accident happens at the Museum".¹⁴ (He had submitted three paragraphs to the Review, the one published, one on "champagne" which was also printed, and a third on "sewage"

1 Cole MS Diary 24 April 1874

2 Ibid. 16 February 1875

3 Ibid. 27 February 1875

4 Ibid. 8 March 1875

5 Ibid. 19 and 20 November 1873

6 Ibid. 8 April 1875

7 Ibid. 8 April 1875

8 Ibid. 12 April 1882

9 Ibid. 2 November 1878

10 Ibid. 19 July 1875

11 Ibid. 29 July 1875

12 Ibid. 17 August 1875

13 Vibart Addiscombe: its heroes and men of note (London Constable 1894) 687

14 Whitehall Review 5 May 1877

which was not.¹ He was later delighted to hear that Richmond, the Lord President "would pay £20,000 to know the author".²) In 1880 he prepared an "indictment of the South Kensington administration", and showed it to Alan,³ but Donnelly advised against publication, as "My Lords were considering the question".⁴ (The full enquiry was not held until 1884). His congratulations to Donnelly on his eventual succession included expressions of pleasure "that at last the folly and paralysis of the last years would be cured".⁵

Cole's efforts to save "his" Museum from being taken over by the British Museum are recorded below.⁶ He carried out campaigns to oppose cuts in the building programme,⁷ to increase the sum available for purchases,⁸ and on the reduction of fire-risk at the Museum.⁹ He promoted schemes for District¹⁰ and Local Museums.¹¹ He freely offered advice to political chiefs on expenditure,¹² on the programme for the Bethnal Green Museum,¹³ and on a "public gallery of casts."¹⁴ He successfully intervened in the arrangements for the disposal of the contents of the India Museum.¹⁵ He continued to be closely involved in the development of the Whitworth Scholarship scheme,¹⁶ and in negotiations over Whitworth's will, which initially bequeathed property and further funds to the Department.¹⁷ He offered advice on the organisation of the College of Chemistry,¹⁸ and on the 1876 Science Exhibition, which he saw as "unattractive and in need of popular illustrations"¹⁹ (He was also a member of a Committee which organised part of the Exhibition.)

His interest in the teaching of Art was maintained: he spoke and gave prizes,²⁰ and when he inspected competition drawings in 1881 "felt that there had been much advance in the last ten years, with women equal to men".²¹ He discussed "Bowler's density in marking" with a Local Committee member²², and was

1 Cole MS Diary 3 April 1877

2 Ibid. 3 May 1877

3 Ibid. 23 September 1880

4 Ibid. 7 October 1880

5 Ibid. 19 January 1882

6 Chapter IX section (c)

7 MS. letter Playfair to Cole 14 November 1873, MS letter Aberdare to Cole 26 December 1873, MS letter Cole to Northcote n.d. September 1875.

8 MS letters Cole to Northcote 26 January 1876 and Northcote to Cole 11 June 1874 and 26 January 1876 MS letter Cole to Elcho 20 July 1881.

9 Ath. 18, 25 January, 1, 15 February 1879

10 Cole MS Diary 5 November 1874

11 Cole *op.cit.* I 356, MS letter Cole to Northcote 11 September 1874

12 MS letters Cole to Spencer 21 June 1880, Spencer to Cole 25 June 1880

13 MS letters Cole to Spencer 20 December 1880, Elcho to Cole 22 February 1881

14 Cole MS Diary 5 July 1880 and MS letter Cole to Aberdare 13 July 1880

15 MS letters Frere to Cole 27 December 1881 and Birdwood to Cole 26 December 1875

16 Cole MS Diary 21 October 1873 and 24 November 1878

17 Ibid. 18 February, 29 March 1876, 17 and 22 November 1877, 10 October 1878.

18 Ibid. 6 October 1874 and MS letter Cole to Spencer 6 October 1880

19 Cole MS Diary 15 April 1876

20 Ibid. 21 and 23 January 1874, 28 November 1878

21 Ibid. 6 September 1881

22. Ibid. 18 August 1877

instrumental in obtaining the appointment of a teacher of Design at the Central School in 1873.¹

His campaigns for the teaching of Music and of "Domestic Economy" would have involved an increase in the Department's sphere of activities had they been successful. His involvement in the setting-up of a short-lived National Training School of Music² was intended as part of Cole's scheme for a transfer of responsibility for the subject to the Department from the Education Department. Donnelly believed that the subject should stay with the primary division³ and "got very excited when I told him that he neither knew nor cared about Music".⁴ He attempted to enlist the aid of Granville⁵ and when Severne, an official of the Education Department, wished to transfer, suggested "that he take Music and Needlework with him".⁶ He led a deputation on the subject of Domestic Economy to the Lord President,⁷ asked Lady Derby for her help,⁸ and assailed the Education Department for its lack of interest.⁹ He tried to get Sandford to promote its teaching under the Department,¹⁰ although at least one writer believed that much of the scientific background of the subject was already covered by its examinations.¹¹ He tried without success to enlist the aid of Huxley¹² and Playfair,¹³ and Redgrave wished him well in his attempts "to tame the present wild race of domestic servants".¹⁴ He was assisted in his schemes by J.C. Buckmaster.¹⁵ His involvement of his son Alan, and of Donnelly, as has been recorded, led to trouble for both. At no time did either Music, Domestic Economy, or "Health",¹⁶ which he suggested to Sandford, come under the Department, although "Hygiene" was later introduced as a subject.

There seems to have been an improvement in relations with his successor, since a mosaic portrait was placed in the Museum in 1878.¹⁷ Cole must have

1 Cole MS Diary 29 December 1873

2 Hudson and Luckhurst op. cit. 265-267 and Cole op. cit. I 364-366

3 Cole MS Diary 22 February 1878

4 Ibid. 23 July 1878

5 Ibid. 17 May 1880

6 Ibid. 9 April 1881

7 Ibid. 9 March 1876

8 Ibid. 7 July 1876

9 Ibid. 7 November 1876 and 15 February 1878

10 Ibid. 29 April 1878

11 Nat. 23 September 1875

12 MS letter Cole to Huxley 20 July 1877

13 MS letter Playfair to Cole 22 January 1878 and Cole MS Diary 19 April 1878

14 MS letter Redgrave to Cole 14 July 1877

15 Pch 20 January and 27 October 1877. (Punch suggested "the great God Pan" as the titular deity)

16 Cole MS Diary 12 April 1882

17 Nat. 23 May 1878

gained pleasure from the award of the K.C.B., offered by Disraeli and accepted the same day.¹ (It is significant that this was awarded at the end of the Exhibitions, and not on his retirement from the Department.) When he told Lady Derby that this "showed that the Conservatives were better friends to Science and Art than Liberals," she said "I told you so."² In his last years, Cole was warned by his Doctors of the state of his heart.³ He died, aged 74, at 7.40 in the morning of Wednesday, 19 April 1882, the day after he had suffered a heart attack on his return from a photographer's.⁴ On the day of his funeral, the Offices and the Museum were closed until mid-day, partly as a tribute, but also because so many persons connected with the Department had said that they wished to attend his funeral.⁵

c) Institutions and Instruments

The most important features of the period were the unsuccessful scheme to transfer the responsibility for the Museum from the Department to the trustees of the British Museum,⁶ the relative lack of success of the International Loan Collection Exhibition as a bid to secure control of a projected Science Museum, and the gradual transfer of the Jermyn Street institution to South Kensington where there developed the Training School for Science teachers.⁷ The first, and only, District Museum was developed at Bethnal Green,⁸ The detailed development of these institutions will be later recorded.

d) The development of facilities in the teaching of Art

There was a gradual increase in the numbers of Schools, students, and entrants for the National Competition during the period.⁹ The Art Night Classes which had been initiated just before Redgrave's retirement suffered a temporary decline because of the Department's insistence on a higher qualification for their teachers, an Art Class Teacher's Certificate, which replaced the original qualification by a Second Grade Certificate which was open to any student without special "teacher training".¹⁰ It had soon become obvious that many Schools had opened without any real prospect of local support, or without

1 Cole MS Diary 17 March 1875

2 Ibid. 21 April 1875

3 Nat. 27 April 1882 (Obituary)

4 Note by Cole's daughter Laetitia, Cole MS Diary 19 April 1882

5 D.S.A.O.B. undated 1882

6 Chapter IX section (c)

7 Chapter VII sections (a)(ix-xi)

8 Chapter IX section (d)

9 Tables XVIII and XXI

10 D.S.A. 28th Report xvi and 30th Report xii

any good qualification on the part of the teacher,¹ but the contrast between the treatment of the Art teachers and that of the Science teachers, who continued to be allowed to teach without any "special" qualification, is significant. There was an attempt to stimulate more advanced studies by an increase in payments on such works.² The system of "bonuses" for the most successful teachers was replaced by higher all round payments.³

As Director for Art, Poynter allowed more time for the examination in freehand and model drawing, but it was discovered that "errors formerly attributed to rapid working are now shown to be due to want of power in drawing".⁴ A former lecturer at the Central School believed that the business of preparation for the competitions was "so slow" that he did not know "why more men are not driven mad by it". He appreciated another of Poynter's reforms in permitting "stumping" in place of elaborate shading,⁵ as "the best way to fill with an appreciation of form is rapid execution".⁶ Poynter's introduction of modelling into the Directory was also welcomed.⁷ There was still a demand for greater emphasis on sketching,⁸ but the Technical Instruction Commission welcomed the steps which had been taken to encourage more rapid execution.⁹

There seems to have been general disappointment at the standards achieved during the period. There were "markedly fewer successes" in the 1878 examinations.¹⁰ "Many students received only elementary grade prizes" in 1880,¹¹ and there was a "general lack of merit" at the 1882 examinations.¹² Despite these comments, as has been noted, classes and students continued to grow in numbers.

e) The development of facilities in the teaching of Science

There were no radical changes in the system during the period, although, as will be noted, attempts were made to improve the supply of trained teachers,¹³ and to provide better facilities for the full-time education of older children.¹⁴

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- 1 D.S.A. 22nd Report 382
 2 D.S.A. 21st Report xiv
 3 D.S.A. 24th Report 224-227
 4 D.S.A. 25th Report 198
 5 R.C.T.I. A. 1594 (William Morris)
 6 Ibid. AA. 2061-2062 (Legros)
 7 Ibid. 520
 8 Ibid. A.881 (Arnoux) AA.957 and 1062 (Wedgwood) A.1595 (Morris)
 9 Ibid. A. 479 (Curzon) and 520
 10 D.S.A. 25th Report 198
 11 D.S.A. 30th Report 347
 12 Art. J. 1882 320
 13 Chapters VII and XI
 14 Section (b)(ii) and Chapter VI sections (i)(ii-iii)

That these met with little success during the period was due in the main to a lack of demand for such facilities from the parents of middle class children who could have supported their children at such schools. Improvements in "practical" facilities were encouraged by requirements imposed in examinations which demanded evidence of "practical experience",¹ and attempts were made to reduce "certificate grabbing" by regulations which limited payments on individual students to their successes in three examinations only.² In general this was a period of steady but not spectacular growth.

f) The movement for Technical Instruction

One most important consequence of the increased demand for Technical Instruction was the appointment of a Royal Commission in 1880, whose deliberations afford much valuable information, and to which reference has been made. As has been recorded,³ Donnelly was a pioneer in the development of privately supported examinations as incentives to the study of technology, as distinct from the "abstract" studies which he believed should be the only instruction aided by the State.⁴ He had been able to persuade the Society of Arts to divert its failing examinations system into this field and thus help to meet the new demands. When Cole attended a dinner of one of the City Companies, in 1873, he noted that "Mr. Venning, the Prime Warden ... said that Mr. Cole would be satisfied with what the Companies would do for Technical Instruction".⁵ The movement seems to have made little immediate progress, however. Donnelly read to Cole a paper which he was to give to the Society of Arts "on a City Technical University". Cole "concurred in a letter to Sir J. Waterlow on the subject".⁶ Donnelly was "vexed" when he was not consulted by Wood, of the Society of Arts, on further action,⁷ but it was announced that the Drapers' Company had given £1000 to the Society to aid in the erection of such a "University"⁸ on the Embankment.⁹

Huxley was also involved in the schemes. He joined Donnelly, Bartley and others in preparing Reports for the Companies,¹⁰ and publicly hoped for "some effective results".¹¹ "For very shame's sake, so elaborate a machine must

1 D.S.A. 25th Report 2-3

2 D.S.A. 30th Report 1

3 Chapter III Section (e)(iii)

4 Chapter VI section (g)

5 Cole MS Diary 11 December 1873

6 Ibid. 9 and 10 April 1877

7 Ibid. 1 May 1877

8 Punch in its best traditions of the period, saw "no need for such a University since "bootmakers could be sent to All Souls, china makers to Worcester" etc (Pch. 27 December 1879)

9 Engg. 11 May 1877.

10 Nat. 20 December 1877 and Cole MS Diary 19 March 1878.11 Engg. 7 December 1877

produce results", said Engineering when the final plan was produced.¹ A new body, the City and Guilds of London Institute,² took over the Society of Arts technological examinations from 1879,³ and from that point the Society concentrated on its commercial examinations.⁴ The influence of Donnelly and Huxley can be seen in the examination methods initially used by the new body. The Department's "assistance" in conducting the examinations was noted,⁵ the teachers of "private enterprise classes" would be paid on the same scale for examination successes, and there would be prizes of money and medals to successful students. There were however no provisions which insisted on the payment of fees. The examinations would be held in May, and the initial requirement, that the Department's examinations must be passed before the technological classes were entered, was a victory for the view that a knowledge of "principles" was basic to further study.⁶

This last feature was disliked by two officials of the new body, one of whom saw it as "a cause of indifference", and another who said that great difficulty was experienced in persuading artisans to take the "preliminary" examinations.⁷ "Freedom from the South Kensington influence" was wished for by the Engineer, which later condemned the City and Guilds for "slavishly following the methods of the Department", although it did admit that "the ball has been set rolling".⁸

Attempts to revive the watch trade,⁹ and wood-carving,¹⁰ were attributed to the influence of the new body. The "Embankment" scheme foundered, but a City and Guilds College was opened at Finsbury after some delay.¹¹ Suggestions came from several quarters for "Technical Schools", for "practical applications" to be connected with "Science Schools",¹² and these were soon developing at Wigan,¹³ Middlesbrough¹⁴ and Glasgow.¹⁵ This development would be a particular feature of the next decade. Donnelly's knowledge of his own involvement in the schemes from their inception must have caused him to be particularly resentful when another official of the City and Guilds implied that the Department had dragged its heels on Technical Education until the new movement has "stirred it up".¹⁶

1 Engg. 15 December 1878

2 Chapter XVII section (A)(b)

3 Nat. 8 May 1879

4 Hudson and Luckhurst op. cit. 255 and Chapter XVII

5 Nat. 8 May 1879

6 Nat. 13 February 1879, Engg. 26 November 1879, R.C.T.I. A.4517 (Roberts)

7 R.C.T.I. A.4503 (Roberts) A.3068 (Magnis)

8 Engr. 18 March and 18 August 1881

9 Engg. 18 June 1880

10 Ibid. and Engr. 1 October 1880

11 Engg. 6 May 1881, 22 September 1882, 30 January 1883

12 Ibid. 30 January 1883

13 Ibid. 30 September 1881

14 MS Minutes Middlesbrough High School 14 July 1887.

15 Engg. 4 June 1880

16 R.C.T.I. A. 4525
(Roberts)

g) The influence on Departmental policy of political chiefsi) Lord Aberdare and W.E. Forster (First Gladstone Administration) (1873-74)

Lowe's transfer to the Home Office¹ was a consequence of Gladstone's rearrangement of his Ministry, which was partly caused by Lowe's lack of success at the Treasury. This brought Bruce, soon to become Lord Aberdare, to the post of Lord President, in full charge of the Department over which he had formerly served as Vice President in 1865 and 1866. W.E. Forster continued as Vice President. Donnelly believed that his new chief, Aberdare, was "very nice but scarcely vertebrate"², but he was years later to have cause for gratitude when Aberdare supported him against the spite of a disappointed Professor.³ The continued term of office of both chiefs was too short for them to undertake radical changes in policy.

ii) Duke of Richmond and Gordon, Viscount Sandon and Lord George Hamilton (Second Disraeli Administration) (1874-1880)

The new Lord President was, in his brother's opinion, "an odd fellow" and "a tough customer".⁴ His relations with his first Vice President do not seem to have been good, and Sandford was thought by Donnelly to "fan the fire" between them.⁵ The second Vice President succeeded Sandon when the latter became President of the Board of Trade in April 1878. He had difficulties with Richmond over his description of himself in his address for his bye-election (which was necessary, by the custom of the time, on attaining office) as "Minister of Education"⁶, and over the responsibility for estimates, over which he claimed the right to be consulted.⁷ These difficulties do not appear to have affected policy.

When Richmond resisted the appointment of a "Minister of Public Instruction" in the Lords, he defended the educational functions of his office, saying that without them, he would be merely "a first class veterinary surgeon".⁸ He was, according to Donnelly, "interested in Science"⁹, and where he could not promote, seems to have been content not to hinder. Sandon's only pronouncement on the Department in the House came when he said that he was not

1 MS letter Donnelly to Huxley 5 August 1873 ("Lowe at the Home Office! Lord!")
MS letter Donnelly to Huxley 14 August 1873 ("Robert gone. Wish the whole Cabinet had gone with him!")

2 MS letter Donnelly to Huxley 14 August 1873

3 Chapter VII section (a)(xi)

4 MS letters Lord Henry Lennox to Cole 14 December n.d. and 24 October n.d.

5 Cole MS Diary 6 February and 5 March 1876

6 Lord George Hamilton Parliamentary Reminiscences and Reflections (London Murray 1917) I 151

7 Ibid. 152-154

8 Hd. CCXIX (1874) 682-696

9 Cole MS Diary 2 July 1876

surprised at expressions of jealousy, since this showed the interest of the public in its tasks.¹ Hamilton later claimed that he had done what he could to "lessen the rigours of the system of payments on results", as "its evils were reaching serious dimensions in Science".² Out of Office, he moved for the papers in the Goffin case,³ and later quoted the affair as showing the worst effects of the system.⁴

h) Relations with the Education Department

i) Central Administration

In theory, the appointment of Sandford as Civil Service Head of both Departments was designed to encourage the co-ordination of their activities. In practice, no real advantages would appear to have come about. After some initial delay⁵, the Vice President, Sandon, told the House that "arrangements are now complete to bring the various Departments (sic) at South Kensington into more direct relations with the Education Department ... in which they will be virtually merged".⁶ On that same day, Playfair moved for a Committee to enquire into the setting up of a Ministry of Education, without success. The Department could be dove-tailed with great advantage into the Education Department, he argued, "but each is afraid of the other, and they are run on two contiguous and parallel lines of rails, with few crossings, lest they should come into violent collision".⁷ The Motion was withdrawn in the face of Members' fears of "a great bureau", Lowe's argument that there would not be enough work for a full-time Minister, who would be "a mere administrator of cash", and Disraeli's assurance that "the government is alive to its responsibility".⁸ Sandford attended Boards at South Kensington,⁹ and his interventions in the affairs of the Department have been detailed, but it is significant that no Boards were held, at Kensington or at Whitehall, for the general oversight of both Departments.

In 1884, just after the end of the period under consideration, a Select Committee to enquire into the administration of the two Departments was set up,

1 Hd. CCXIX (1874) 1654

2 Hamilton op. cit. 158

3 Hd. CCLXVI (1882) 236

4 Hamilton op. cit. 158

5 Hd. CCXVIII (1874) 1261. Donnelly told Cole that "A clever financial man from the Treasury is coming to manage South Kensington," but nothing developed. (Cole MS Diary 9 April 1874)

6 Hd. CCXIX (1874) 1586

7 Ibid. 1589-1592

8 Ibid. 1592-1623

9 Cole op. cit. I 307 and S.C.A. A.649 (Carlingford)

and evidence given to that Committee gives a picture of the details of organisation at that time.¹ The division of functions continued to be between the primary and the secondary services,² with an undefined middle ground of Science and Art instruction of elementary school children. (The Art responsibilities of the Department certainly went beyond what the Lord President, Carlingford, called "Art in its application to industry".³) The political chiefs "always attended the Boards at South Kensington", and this was "the most convenient arrangement" because "it saved a vast amount of correspondence" and "made the despatch of business more rapid and efficient". While in the primary department the Vice President dealt with day to day affairs, referring "questions of novelty" to the Lord President, the senior Minister took a relatively greater part in the affairs of South Kensington, because "it presented questions of greater variety" and because its purchases were more important.⁴ South Kensington "occupied a very small share of the work" Mundella stated. "(It) occupied me one day a week, the Education Department five days".⁵

While Sandford remained in overall charge of the two Departments until his retirement in 1884, it is notable that his successor as Secretary of the Education Department, Cumin, did not attend Boards "unless primary school business was being discussed".⁶ The Committee on Administration strongly recommended the creation of a Ministry with full responsibility for all Education services. However, it saw no need to disturb "the existing arrangements for the supervision of the Science and Art Department",⁷ after Sandford had said "The present system works well on the whole."⁸ It would seem that geographical location was the cause of the absence of greater co-ordination between the Departments, but a more cogent reason was probably the resistance to change of the senior officials in both sections. What is most surprising is that there appears to have been a complete lack of co-operation in the vital fields of full-time education, where the Department was attempting to develop the study of Drawing and of Science. The slow development of day Science Schools had to be undertaken in competition with the Education Department, and not with its support, and the last years of the Department would see even greater confusion

1 P.P. (1884) XIII (501)

2 S.C.A. AA. 701 (Carlingford) 709

3 Ibid. A. 666

4 Ibid. AA. 640, 642, 643, 645, 648, 734-736 (Carlingford) 392 (Forster) 787 (Hamilton)

5 Ibid. A. 1066

6 S.C.A. A.649 (Carlingford)

7 Ibid. ix 8

8 Ibid. A.103

in this field. Although Playfair was a member of the Committee which saw no need for change, he had told a Congress of Teachers in 1877 that while both Departments were indeed under one Minister, they were still in no other way connected, and he used his "parallel rails" metaphor once more.¹

ii) Work in elementary schools

The introduction into the Education Department's Code of payments for specific subjects was a "liberalisation", and science teaching was included from 1880. The passing of the 1870 Education Act brought about an eventual raising of standards which, in one obvious form, was commented upon by Huxley when he said that "~~eccentric~~" spelling and handwriting were tending to grow less in examination papers,² although concern could still be expressed at deficiencies in basic instruction.³ The British Association believed that "Inspectors appointed for high learning" would not be able to give much help in the teaching of science subjects,⁴ and suggested that more Inspectors with qualifications in the natural sciences should be appointed.⁵

Although the Department was unable to encourage the teaching of Science in elementary schools by making payments, its officials did use every opportunity they could to urge the teaching of the subject. As a member of the London School Board in its first two years, Huxley attempted to encourage the study in its schools of "the elements of physical science".⁶ In 1879, he was Chairman of a Committee of the School Board which made recommendations on "systematic object lessons in Science",⁷ and the Board, by making additional payments to teachers who gained Department Certificates, played its part.⁸ ("Religious rancour" had been the chief feature of elections to the Board" in 1876, Engineering had reported, "with scarcely any reference to the teaching of science",⁹ but some consideration was now being given to the question). Huxley and Donnelly advised the Liverpool School Board on the study of subjects encouraged by the Department, in 1879, "to relieve the grind of subjects under the Code",¹⁰ but the children in day classes cannot have been entered for examinations. Donnelly also advised the Liverpool Board on "science demonstrations" four years later.¹¹

1 Presidential Address to the Teachers' Congress F.R. XI (January-June 1877) 207-219

2 R.C.T.I. A.3016

3 N.A.P.S.S. 1874 Report 119 (Samuelson) 1875 Report 200 (Sir Charles Reed, Chairman of the London School Board).

4 Br. Assn. Report 1880

5 Br. Assn. Report 1881

6 D.N.B.

7 Nat. 5 June 1879

8 R.C.T.I. A.3766 (Fitch)

9 Engg. 1 December 1876

10 N.A.P.S.S. 1879 Report 201 (Hand)

11 Br. Assn. Report 1883 (Carpenter)

While there were no immediate consequences of the recommendations of the Technical Instruction Commission that elementary school drawing should be "examined by Whitehall Inspectors",¹ concern was felt that the fact that the introduction of specific subjects under the Code was causing many elementary schools to give up Drawing, as the relative insufficiency of the Department grant, at an average of £6.5.0. a school in 1883, "rendered it not worthwhile".² (At the same time, it was "being taught almost universally in the "middle class schools" established when the poorer children were "lost to the Board Schools"³) That was but another example of the lack of co-operation and co-ordination of policy between the two Departments which continued throughout the period.

i) Summary of the period

This would appear to have been very much a period of "interregnum" as far as overall direction of policies was concerned. Donnelly, in his own sphere, was able to extend the Department's activities into the realms of wider scientific administration, and the general transfer of the Jermyn Street Institution to South Kensington, and its transformation into a 'Normal School of Science' was successfully completed during the period. Schemes to develop day teaching of Science continued to hang fire, partly because of the continued lack of co-operation from the theoretically "unified" sister Department, but Donnelly was able to influence the development of technological examinations along lines which suited Departmental policy. In the field of Art, Poynter introduced minor reforms, but, as in the Science areas, the general system of encouragement and control of teaching remained firmly on the basis of "self support" and "payment on results".

j) The "Founding Fathers" : Cole and Redgrave

During this period, Henry Cole died and Richard Redgrave retired. It will be convenient to consider here their contributions to the development of the Department to which each devoted the greater part of his life.

"King Cole"

i) A family business

A man with so many interests, and with so much energy as Cole possessed would have needed in addition great tact and finesse if he were to avoid making enemies. Much of the opposition to the Department, which lasted for long after

1 R.C.T.I. 520

2 D.S.A. 31st Report 4 and 80

3 R.C.T.I. A. 1112 (Sparkes)

his retirement and, in fact, after his death, was in fact opposition to Cole and to a chimerical "South Kensington party". He spent part of his energies in ensuring that his family would share in his success. He had eight children.¹ Of his first five daughters, two married, and one became engaged to, members of the Department. In each case, Cole promoted their interests. Henrietta Lindsay ("Hennie") became engaged to John F. Iselin², tutor to his son Harry, in April 1861.³ Iselin became occasional Inspector for Science in November of that year, and assisted Cole in the organisation of the 1862 Exhibition. He appears not to have married Hennie⁴ after a quarrel over his independent action in connection with the Exhibition, but he eventually became Assistant Director of the Science Division. Mary Charlotte, third daughter and third child, married G.C.T. Bartley⁵, a school friend of Cole's son Harry, who joined the Department in 1861, and gained rapid promotion, before he left to engage in full-time business on his own account, eventually becoming a Conservative M.P. and a millionaire to boot. (Another friend of Harry's, McHardy, was found a berth as Indexer of a Naval Catalogue in 1869.⁶) Cole refers also to a "Charlotte", possibly a niece, who married Thurston Thompson, the Official Photographer to the Department, in January 1857.⁷ Despite the latter's "slowness",⁸ the "sluggishness" of his Department⁹, and his general inefficiency, which caused the commercial side of his activities to be taken from him in 1862, when a loss was thus converted into a profit,¹⁰ he remained in Office until his death in 1868.¹¹ (In an attack on the Department in 1860, it was charged that Thompson was Cole's son in law.¹²)

Isabella Langdale, fourth daughter and sixth child, found it "impossible" to meet Francis Rede Fowke, son of Captain Fowke, "without emotion", in February 1869.¹³ (He had joined that year as a second class clerk). She "hoped that he would be moved to another office" in July¹⁴, but a year later Cole was 'discussing his promotion with Macleod'¹⁵ as a prelude to the marriage settlement¹⁶

1 Cole Miscellanies

2 Biographical Appendix

3 Cole MS Diary 21 April 1861

4 "Miss H. Cole's" share in the Art Inventory compilation was noted after Cole's retirement. (P.M. J 2 Mus. 181)

5 Biographical Appendix

6 P.M. C 2 Mus. 237

7 Cole MS Diary 13 January 1857

8 Ibid. 5 December 1857

9 Ibid. 13 December 1857

10 MS.M 15.67

11 P.M. B 2 sec. 182

12 Hd. CLXI (1860) 1550 (Coningham)

13 Cole MS Diary 4 February 1869

14 Ibid. 5 July 1869

15 Ibid. 2 July 1870

16 Ibid. 18 August 1870

and later marriage.¹ (Fowke eventually became Assistant Director of the Science Division). A book on Elementary Drawing by Cole's first daughter and first child, Laetitia ("Tishy") whom he named after his mother, was published by Chapman and Hall, the Department's publishers, in 1864.² Cole noted hopefully, perhaps, that "Tishy attended church with Donnelly" (who remained unmarried until 1871) in 1862,³ but she died unmarried. His fifth daughter and seventh child, Rose Owen, receives few mentions in the Diaries and possibly died in infancy.

Henry Hardy, the first son and fourth child, attended Addiscombe and was commissioned in the Royal Engineers.⁴ He married Miss Worselock, who was connected with the Central School of Art, in 1864.⁵ During Harry's service with the Indian Army, Cole obtained a special commission for him to make casts for the Museum, resenting the suggestion that this might be seen as a "job".⁶ However, he "quite disapproved" of an attempt by Harry's wife to influence the Duke of Richmond to obtain a post for her husband with the Department after his own retirement.⁷ He preferred instead to try to persuade his old friend Northcote to gain Harry a commission to design the new Patent Museum for which he was agitating.⁸ Although unsuccessful, he was able to have Harry appointed as Architect of the new building for the National Training School of Music, one of his later concerns.⁹ (It had been occupied since 1903 by the Royal College of Organists.¹⁰) Harry produced successive Reports on Indian Antiquities for the Museum, and eventually retired as Lt. Colonel.

Alan Summerly¹¹ (given his father's "Felix Summerly" pseudonym as a second name) second son and fifth child, was the son most connected with the Department. His appointment as a provisional clerk in 1864 could have been the cause of the normally equable Granville's query to Cole about "how many relations I had in the Museum",¹² and a diatribe in the Art Journal that it was "high time that nominee-ships for high positions should be abandoned."¹³ Alan helped to examine Art Schools,¹⁴ but in the main acted as Private Secretary to

1 Cole MS Diary 5 October 1870

2 Ibid. 7 January 1864

3 Ibid. 24 August 1862

4 Ibid. 13 December 1862

5 Ibid. 8 June 1864

6 Ibid. 29 July 1867

7 Ibid. 27 February 1874

8 MS letter Cole to Northcote 1 February 1875

9 M. Pevsner The Buildings of England, London (except the Cities of London and Westminster) (London Penguin Books 1952) 256

10 Calendar of the Royal College of Organists (London Jacques 1905) 26

11 Biographical Appendix

12 Cole MS Diary 26 February 1864

13 Art J. April 1864

14 Cole MS Diary 23 March 1864 (Bath) and 4 April 1866 (Dublin)

his father. Cole was unsuccessful in a bid to create the post for him, just before his own retirement, of Clerk to the Board: such a post (and the nomination) was "not considered necessary by My Lords."¹ (Cole later endeavoured to obtain for him the post of successor to Bartley.²) While he suffered during the period from his father's retirement to Donnelly's succession, as has been recorded, he gained gradual promotion to a post as Assistant Secretary with the Board of Education.³ Cole named his third son and youngest child Granville, after his old patron. The boy became an industrial chemist,⁴ and eventually was employed by his father's sewage company.⁵

"The British system of Administration is based on the Chinese principle of universal competition", Cole told a foreign Royal visitor to the Museum in 1872.⁶ He probably sincerely believed that it was. It could be argued that none of the appointments or promotions was in itself a very serious example of nepotism, but taken together, they cannot have improved the regard in which the Department was held by the rest of the Civil Service or by the world at large.

ii) The Royal Connection

The way Cole ran the Department almost as a "family concern" was one cause of opposition. Another equally potent factor in the creation of suspicion was the "Royal connection". "Prince Albert has the Department in a box, people are saying", Lowe told Cole in 1860.⁷ "Punch" called the South Kensington buildings "Albert's folly".⁸ The 1861 Exhibition was a "job" by means of which the value of the Consort's property in the area would be inflated, Cole heard in 1861, and Cole was the Consort's "scheming tool".⁹ From the dedication of the Journal of Design to the Consort in 1849,¹⁰ to the gift of a "Summerly" cup and saucer to Albert Edward, his son, in 1878,¹¹ Cole lost no opportunity to ally himself to the Court, and he shared in its unpopularity. The connection which began with the Society of Arts and the Great Exhibition developed considerably after the Department was founded. The Consort was

1 P.M. K 2 sec. 29

2 Cole MS Diary 11 February 1880

3 Chapter V section (i)(iv)

4 Cole MS Diary 28 August 1875

5 Ibid. 23 July 1878

6 Ibid. 2 December 1872

7 Ibid. 21 June 1860

8 Pch. 18 January 1859

9 Cole MS Diary 6 March 1861

10 J. of D. I Frontispiece and MS letter Phipps to Cole 13 July 1849

11 MS letter Albert Edward, Prince of Wales to Cole 11 November 1878

generous with advice, and assistance particularly on the development of the Museum¹, but also on general policy² and appointments³, and, as has been recorded, on Cole's own position. The appointment of Redgrave as Surveyor of the Royal Pictures was due to Cole's intervention.⁴ Cole asked if the Royal tradesmen could be induced to work to designs produced by the Central School⁵, and thanked the Queen for her interest in Honiton lace designs produced there.⁶ He was discomfited when a piece of ornament from Wellington's "funeral chariot" fell on the Consort's foot during an inspection of the vehicle, but was relieved no doubt to learn that the injury "was not serious".⁷

In his turn Cole offered advice on a variety of topics, from the reform of Court Dress (which still included the bag-wig⁸) to the design of the newly instituted Victoria Cross. (He was told that the design had already been chosen.⁹) A visit by Cole, to present a gift from the Consort, to the Viennese Court, led to a report in the Breslau Gazette that private communications were passing between Windsor and the Schönbrunn, and that Palmerston's resignation was expected shortly.¹⁰ (The Minister was in his usual bad odour with the Court at the time.) Cole also got the Consort's views on public school education when he asked him to withdraw a nomination made to Charterhouse on one of his sons' behalf, as he was "disappointed by what he had discovered about instruction there".¹¹ The Prince said he would not send his sons to a public school, but would "retain Latin as a basis of scientific study".¹² The advice offered by Cole on the arrangement with the Commissioners, and the end of that scheme, have been recorded.¹³ Particularly significant is the Consort's remark on "the union of the Prince and the people" being the "object of jealousy and hatred", and his comment that "part of the jealousy attached to you and Playfair."¹⁴

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- 1 MS letters Phipps to Cole 1 October 1856 (buildings) Grey to Cole 13 July 1857 (Parliament) 27 July, 29 October, 1856, 16 September 1858 etc. (Collections) 15 May 1852 etc. (Royal visits) Phipps to Cole 23 July, 15 August 1857, 9 December 1858 (extension of the railway)
 - 2 MS letters Grey to Cole 16 July 1853 (estimates) 6 June 1860 (drawing) 26 April 1860 (Schools of Art)
 - 3 MS letters Cole to Grey 13 June 1853 (Capt. Owen) 16 January 1852 (minor posts)
 - 4 MS letters Cole to Grey 29 July 1857 and Grey to Cole 1 September 1857
 - 5 MS letter Cole to Grey 29 June 1853.
 - 6 MS letter Cole to Grey 23 July 1856
 - 7 Cole MS Diary 16 February 1853 and MS letter Grey to Cole 16 February 1853
 - 8 MS letter Cole to Grey 6 February 1854
 - 9 MS letter Phipps to Cole n.d. (1855?)
 - 10 MS letter Grey to Cole 27 January 1854
 - 11 MS letter Cole to Grey 8 October 1856
 - 12 MS letter Phipps to Cole 1 July 1857
 - 13 Chapter II (c)(iv)
 - 14 MS letter Phipps to Cole 18 August 1856

There is little doubt that the support for the Consort and his policies lay in the main with the Conservatives, but much opposition also came from members of the party, as will be detailed later,¹ as will the Consort's own views on the politicians. The Consort's death must have come as a bitter blow to Cole. "Alarming bulletins" and the Prince's death were noted without comment.² "God help us all!" Grey wrote only two days later. "No-one will appreciate the terrific magnitude of the appalling calamity more than yourself ... what is to become of the plans and undertakings which you and others have promoted under his inspiration and support?"³ The Queen seemed relatively composed,⁴ and was "talking of all the details of the Prince's wishes".⁵ Cole's immediate reaction was to plan "an Industrial University as a memorial".⁶ "It was better than Science scholarships", Murchison believed.⁷ Cole wrote a letter to Granville for publication in The Times, and took the letter to the newspaper himself.⁸ "Jealousy of Kensington"⁹ nullified the scheme, and Cole was told that if it were adopted "it would not be your idea".¹⁰ Like so many of his schemes, it was ahead of its time, and nothing more is heard of it.

Cole then busied himself with the scheme for the first of the Albert Memorials, which stands today behind the Albert Hall.¹¹ (His name is recorded on its plinth.) He seems to have had little involvement in the scheme for the more famous Memorial, but the Consort's statue does hold a Catalogue of the Great Exhibition. The Queen, following the Consort's wishes, took the Museum under her special patronage,¹² but Cole was unable to obtain a public announcement of this.¹³ (She continued to make frequent loans from the Royal collections,¹⁴ sanctioned the name "Victoria and Albert Museum" for the Museum, and laid the foundation stone of its new buildings on 17th May 1899 as one of her last official acts.) She was a patron of the Female School,¹⁵ and took an interest in, although she did not visit, the 1862 Exhibition.¹⁶ She was not, however,

1 Chapter XIII section (b)(ii)

2 Cole MS Diary 14 December 1861

3 MS letter Grey to Cole 16 December 1861

4 Cole MS Diary 19 December 1861 (Lennox)

5 Ibid. 20 December 1861 (Granville)

6 Ibid. 29 December 1861

7 Ibid. 1 January 1862

8 Ibid. 5 January 1862

9 Ibid. 23 February 1862 (Grey)

10 Ibid. 22 April 1862

11 Cole MS Diary 24 February 1862 and MS letter Salisbury to Cole 8 June 1862

12 Cole MS Diary 2 January 1862 and D.S.A.O.B. 6 January 1862

13 MS letter Cole to Granville 11 January 1862 and Granville to Cole 11 January 1862

14 Annual Reports

15 Chapter IX section (b)(ii)

16 MS Letters Phipps to Cole 14 August 1862 and 19 January 1863

prepared to lend her name to the scheme for the Royal Albert Hall "as the time is not yet ripe"¹, or to Cole's scheme for a School of Music.² The last letter from the Queen was sent in 1865, when she thanked Cole for his good wishes.³ At a time when Cole needed Royal aid most, in his fight to preserve "his" Museum, after his retirement, he met with a refusal of any Royal aid, as will be recorded,⁴ and when Redgrave retired as Keeper of the Queen's pictures, the appointment of Cole's arch enemy Robinson as his successor must have reminded Cole forcibly that the "Royal connection" had ended effectively with the Consort's death. The connection was vital in the early days, but the opposition which it eventually engendered became an embarrassment which would linger for many years.

iii) Parliamentary friends and foes

While the Parliamentary criticism of the Department will be detailed later,⁵ there were several occasions when Cole was charged in the Commons by name or by implication. The propriety of "a principal officer retailing wine at South Kensington", was queried over the sale of refreshments.⁶ He was named in an attack on the Court⁷, and his official residence was queried.⁸ It was charged that he had forced his officials to take part in "black face shows".⁹ (Cole's defence was that participation in the entertainment, which was to raise funds for the Female School, was voluntary,¹⁰ but Punch could still remember three years later that he had "had the Queen at his mumbo jumbo show".¹¹) He was taking on too much responsibility, it was charged,¹² and "the hand of the trusty and well beloved Henry Cole" was seen "behind the job" of the Paris Exhibition of 1867.¹³ His "familiarity with Science" was questioned,¹⁴ he was accused, by implication, of gross neglect in the Simkins case¹⁵, and of "opening the Bethnal Green Museum to the rich and closing it to the poor" by issuing special Sunday tickets to peers and M.P.s¹⁶ His pension arrangements were queried at the time of his retirement¹⁷, and even six years later the House was

1 MS letter Phipps to Cole 14 February 1865

2 MS letter Phipps to Cole 1 November 1865

3 MS letter Phipps to Cole 23 December 1865

4 Chapter IX section (c)

5 Chapter XIII

6 Hd. CLI (1858) 1176 (Elcho)

7 Hd. CLX (1860) 1306 (Coningham)

8 Hd. CLXXI (1863) 760 (Smith, Cavendish-Bentinck)

9 Hd. CLXXVI (1864) 561-2 (Ayrton)

10 Cole MS Diary 30 June 1864

11 Pch. 9 March 1867

12 Hd. CLXXVIII (1865) 1177 (Gregory)

13 Hd. CLXXXV (1867) 892 (Barnal Osborne)

14 Hd. CXXI (1868) 163 (Samuelson)

15 Hd. CCXIII (1872) 400-401 (Rylands)

16 Hd. CCXII (1872) 947 (Helms)

17 Hd. CCXVIII (1873) 152 (Hoare)

told that "we have all heard of the celebrated Mr.(sic) Cole. He and his friends have been ordering South Kensington about for years, and scattering public money about in all directions."¹

It is a tribute to Cole's handling of personal relationships that he could secure eventual support, or grudging admiration, from some of his most outspoken critics. Elcho, who had called him a "publican" and effectively prevented the transfer of the National Gallery, called at his "kingdom"² and was "briefed on Technical Instruction"³ for a meeting on the subject.⁴ He offered his help on Museum schemes,⁵ was "ready to denounce any attack"⁶ and was persuaded to press for new buildings.⁷ He eventually suggested the title of Cole's Memoirs.⁸ W.H. Gregory advised Cole that the Universal Art Catalogue would invite opposition,⁹ could "chuckle" at Cole's evidence to the 1864 Committee,¹⁰ ask Cole if he agreed with a speech,¹¹ assure him that a comment on the collections¹² was meant to be friendly,¹³ and become an ally against Lowe in 1873.¹⁴ F. Cavendish-Bentinck, too, was won over. "You have nothing to fear in the Boilers", he told Cole, and assured him of the additional support of his fellow converts Gregory and Elcho.¹⁵ "Someone told Locke I had a shop in Bond Street for Art manufactures" Cole noted in 1860,¹⁶ but a few weeks later Sir John Shelley, another critic, said that he had originally been prejudiced against Cole as "an Artful Dodger" but that he, with Locke and others, had been won over,¹⁷ and he defended Cole in the House later in the year.¹⁸ Potter could warn Cole¹⁹ that he intended to raise several critical questions on the estimates in 1865,²⁰ and Cole recorded with pride Potter's belief that he was "too clever, and the only man the House of Commons could not keep in order!"²¹

1 Hd. CCXLVIII (1879) 1962 (Jenkins)

2 MS letter Elcho to Cole 11 August 1864

3 Cole MS Diary 21 June 1869

4 Engr. 18 June 1869

5 Cole MS Diary 2 March 1870, MS letters Cole to Elcho 20 July 1881, Elcho to Cole 20 July 1881

6 Cole MS Diary 28 May 1871

7 Ibid. 1 May 1877

8 Ibid. 14 March 1873

9 MS letter Gregory to Cole 25 January 1867

10 Cole MS Diary 27 June 1864

11 Ibid. 5 October 1868

12 Hd. CCVII (1871) 677

13 Cole MS Diary 27 June 1871

14 MS letter Gregory to Cole 26 November 1873

15 MS letter Cavendish-Bentinck to Cole 30 May 1871

16 Cole MS Diary 3 July 1860

17 Ibid. 19 July 1860

18 Ibid. 14 August 1860

19 Ibid. 4 April 1865

20 Hd. CLXXVIII (1865) 1164-1166

21 Cole MS Diary 16 March 1865

Cole could even "talk after the debate" with his greatest Parliamentary foe, W.H. Ayrton,¹ and quoted approvingly a comment of Ayrton's related to him by Lennox, that "Cole sleeps with one eye open, and I am disposed to join the Kensington party".² Beresford Hope, another critic, told Playfair when the estimates passed in 1871 that "the Queen should make Cole a Duke"³ and E.Baines, an inveterate opponent of "State intervention", subscribed to Cole's retirement testimonial.⁴ Cole found his old acquaintanceship with Stafford Northcote, with whom he had been at temporary variance at one time, particularly useful. Northcote briefed him on possible questions from the 1864 Committee,⁵ promised support against capitation proposals,⁶ and praised the Department publicly.⁷ (Cole's help with Northcote's own constituency School and Museum has been recorded). He was, however, as Chancellor of the Exchequer to be less helpful. Cole was also to believe that he had found an ally in A.J. Mundella. He helped him with a motion on Museums which does not appear to have reached the House,⁸ and prompted parliamentary questions⁹ which were designed to irk the Department's new masters.¹⁰ Cole helped Mundella with the foundation of the Museum in his constituency, and was greatly pleased, when the politician became Vice President in 1880, at his praise of Cole's work "as being worth millions of pounds".¹¹ This changed to distrust when Mundella told him he was "free to act as he liked" in his "schemes for Cookery and Music",¹² and he finally dismissed him as "much cry and little wool".¹³

Cole was initially on good terms with Robert Lowe. Lowe promised to "assail" capitation schemes "violently",¹⁴ offered his aid in defence of estimates,¹⁵ and agreed that to give Local Committees any share in the assessment of results "would be like setting the cat to watch the cream".¹⁶ When he asked for an "order to see the pictures", in 1866, he referred to "old acquaintance sake"¹⁷, but this was to mean little in the future.¹⁸

1 Cole MS Diary 5 May 1865
 2 Ibid. 5 July 1864
 3 Ibid. 30 July 1871
 4 Nat. 4 September 1873
 5 MS letter Northcote to Cole 16 June 1864
 6 Cole MS Diary 28 April 1864
 7 Ibid. 9 February 1870
 8 Ibid. 15 March 1874
 9 Hd. CCVII (1876) 1567
 10 Cole MS Diary 19 March 1876
 11 Ibid. 4 January 1881
 12 Ibid. 20 January 1881
 13 Ibid. 28 January 1881
 14 Ibid. 13 July 1864
 15 MS letter Lowe to Cole 20 March 1865
 16 Cole MS Diary 27 April 1865
 17 Section (g) and Chapter IX section (e)
 18 Cole MS Diary 4 May 1866

Cole had no direct official or unofficial correspondence or meetings with Disraeli (apart from the eventual offer of the K.C.B.) and very little intercourse with Gladstone. He sent him a copy of the "Summerly Fairy Tales" in 1850,¹ and the politician made frequent loans to the Museum.² Gladstone was, however, prepared to offer no aid in Cole's campaign to encourage Music under the Department,³ or in his scheme for District Museums.⁴ Cole believed that he was an ally of Robinson and of Lowe in their campaign against the Museum, as will be detailed.⁵

Undoubtedly Cole's most important friend inside and outside of Parliament was Earl Granville. In and out of Office Granville advised Cole to temper his attacks on a variety of targets. He warned him of the dangers of creating enemies at the Society of Arts, of which they were both members,⁶ of "getting into a row with J.C.R.'s (Robinson) dilettante friends⁷, of his conduct in defence of the Museum, and in the furtherance of other schemes,⁸ However, the equable Granville, whom even Lowe found "easy to get on with"⁹, later admitted that he had found Cole "most disagreeable" in the earliest days of their relationship at the Board of Trade, although he had later grown fond of him.¹⁰ "Lord Granville thought me a genius for butting against people, but my judgment was sound", Cole was told in 1862.¹¹ As has been recorded, Granville warned Cole about the dangers of introducing relatives in the Department, and it has also been noted Cole named his third son after his old friend. Granville later recalled that he had "never enjoyed more the hours spent with you and Lowe at Boards."¹²

Cole's most willing ally among the politicians was Lord Henry Lennox, Conservative M.P. from 1846 to 1885, whose brother the Duke of Richmond was Lord President from 1874 to 1880. They were particularly close friends in 1861 and 1862. Cole was behind a motion by Lennox for the appointment of a Minister to be responsible for all National Museums,¹³ and Adderley believed

1 MS letter Gladstone to Cole 5 April 1850

2 MS letter Gladstone to Cole 17 August 1871 etc.

3 MS letter Gladstone to Cole 29 December 1865

4 MS letter Gladstone to Cole 2 August 1865

5 Chapter IX section (c)

6 Cole MS Diary 1 February 1861

7 MS letter Granville to Cole 4 January 1868

8 MS letters Granville to Cole 29 December 1873 and 17 March 1875

9 Cole MS Diary 24 April 1860

10 Ibid. 24 October 1867

11 Ibid. 24 February 1862

12 MS letter Granville to Cole 11 May 1875

13 Cole MS Diary 1 October 1861 to 19 March 1862, two undated letters Lennox to Cole (1862?) and Hd. CLXV (1862) 1750-1777, 1801-2

that "Cole had chosen not a bad instrument".¹ Lennox "did not envy you your new Vice President (Bruce) but he will soon be plastic in your hands",² and he defended the Department in Parliament on many occasions.

Cole corresponded with Lady Derby³ and with Lord Derby, who gave him on one occasion a text-book exposition of the duties of government, as seen by a Tory nobleman, which were "Keeping the peace at home and abroad, collecting the revenue, paying the national creditors and seeing the laws are observed ... only admit that all good and useful works ought to receive Parliamentary aid, and where do you stop?"⁴ An interesting letter was once received from the Duke of Devonshire, who asked if an official who was coming at the Department's request to examine the Library at Chatsworth was "a gentleman" as he wanted to know whether to ask him to dine.⁵ After the end of their official relationships, Cole continued to correspond with Ripon,⁶ Salisbury⁷ and Bruce, later Lord Aberdare, who once compared his zeal with Luther's, and said that "the horse that wins the race must gallop beyond the goal".⁸ As has been said, Cole was most assiduous in developing personal friendships with people who could help with his schemes, and their influence must have been incalculable.

iv) The "Soulages affair".

The means whereby Cole obtained the Soulages Collection for the Museum, despite several refusals by successive governments to sanction the purchase, reveal the ways in which he was able to get his own way and how, if the methods came to light, his reputation for deviousness could be reinforced. The Collection was one of Italian and French pottery, bronzes and watercolours, and Cole first met the refusal of the Treasury to its purchase in 1856. He then sought to interest a number of patrons in a scheme for private purchase and, presumably, exhibition by fee, which would eventually raise the funds to pay off the guarantors and enable it to be presented to the Museum.⁹ Punch, knowing nothing of the Consort's reservations, already quoted, suggested that the purchase was intended "qu'il lui fait des soulagements" after the failure of the National Gallery transfer plan.¹⁰ Salisbury, not yet in office, yielded

1 Cole MS Diary 22 March 1862

2 MS letter Lennox to Cole 23 April 1864

3 MS letters Lady Derby to Cole 8 September 1873 and Cole to Lady Derby 23 August 1873

4 MS letter Derby to Cole 17 December 1864

5 MS letter Devonshire to Cole 14 September 1877

6 MS letter Ripon to Cole 3 June 1880

7 MS letters Salisbury to Cole 13 September 1861 and 8 June 1862

8 MS letter Aberdare to Cole 11 February 1875

9 Cole op. cit. I 290

10 Pch. 20 December 1856

and "thought eventually the Department would succeed".¹ Gladstone was "not against Soulages" at first, but Palmerston and others must have persuaded him to the contrary.² Further refusals were received from the Treasury before³ and after Palmerston, visiting an Exhibition of the collection at Marlborough House,⁴ asked "what is the use of such rubbish to our manufacturers?"⁵ Another refusal by the Treasury, even with a change of Ministry, led the trustees of the Collection to sell it to the Executive of the Manchester Art Treasures Exhibition for £13,500. (Cole said that it had been valued at £25,000).⁶

Cole then used an administrative device, first approved by Henley, which allowed rent to be paid on objects while their authenticity was being tested. There is no doubt that this was fully dealt with at meetings of the Board. After "purchase postponed",⁷ a Minute was proposed for "purchases from time to time"⁸ and this offer was accepted by the Manchester Exhibition Committee.⁹ In effect, the collection was purchased piece-meal by quoting the charges as rent, not purchases. In 1861, "My Lords" pointed out to the Treasury that "only they were responsible for procuring examples out of monies voted", and "remarked with satisfaction that the Treasury disclaim any intention of interfering with the Soulages purchases".¹⁰ Cole claimed that Salisbury, the Lord President at the time, gave full approval,¹¹ and in March 1863 he told Lowe, then Vice President "of my purchase of Soulages and liability for £2000".¹²

The matter came to full light in 1865, when Dillwyn, an inveterate foe of the Department, called attention to the method of purchase and said that this was an example of "deferred payments", against which Gladstone, the Chancellor, was on record, as a means of concealing real expenditure, and that furthermore, the Department had had to pay 5% annual interest.¹³ The collection was described by members as "paltry" and "a wretched display ... the greater part of old locks." Only Elcho of the members defended the Department's action.

1 Cole MS Diary 6 February 1857

2 Ibid. 22 July 1857

3 MS.M. 6.114-116

4 MS.M. 6.145

5 Cole op. cit. I 292

6 Cole op. cit. I 292-293

7 MS.M. 8.162

8 Ibid. 8.188

9 Ibid. 8.199 and 8.219

10 Ibid. 12.138

11 Cole op. cit. I 293

12 Cole MS Diary 23 March 1863

13 Hd. CLXXX (1865) 410

Bruce, the Vice President, said that there had been "a somewhat elastic interpretation" of Henley's rule, but that he believed that "the Statute of Limitations ought to be applied". John Locke, Augustus Smith and Potter, all former critics, defended the purchase but not the method. There was no vote of censure, or even division.¹ Cole later said that he was "upbraided by the Treasury" but that "Lowe came to his aid".² The collection had had a very great influence on design, he later argued,³ and he gleefully recalled several years afterwards, in conversation with his son-in-law Bartley, "how I had beaten Palmerston on Soulages".⁴ He thus emerged victorious: he was within the bounds of legality in what he had done, and his political chiefs had approved his actions, but to his foes this was further material for criticism.

v) Financial acumen?

For a man who argued almost to the end of his official career that "sound commercial principles" should apply in the field of education, where his scheme of payments on results was to have such wide influence, Cole's success in fields where these principles could be seen more directly to apply would seem to have been limited. It was alleged that his "Summerly Art Manufactures" were "speculations which ended in failure".⁵ The International Exhibition and the private Sewage Company which occupied him after his "retirement", ended the same way. The great increase in value of the land they still held at Kensington led the Commissioners to propose a further series of International Exhibitions, to be financed out of their profits.⁶ The Society of Arts co-operated,⁷ and Cole was appointed full-time manager, at a salary of £1000, on his "retirement".⁸ Exhibitions were held in successive years from 1871 to 1874. The method of promotion, by different industrial groups each year, the exclusion of foreigners from the organisation, and the absence of a competitive element, led to a decline of interest among the general public. It was "perfectly clear that the manufacturers do not require managing by a semi-military autocracy", said the Art Journal, in pointing to a reduction in attendances from 1,142,000 in 1871 to 466,000 in 1874.⁹ There was a final loss to the Commissioners of £150,000.¹⁰

1 Hd. CLXXX (1865) 411-414

2 Cole op. cit. I 293

3 Ibid. 294

4 Cole MS Diary 3 March 1868

5 Art J. April 1852

6 Engg. 29 April 1870

7 Hudson and Luckhurst op. cit. 206, 222

8 Hd. CCXVII (1873) 252

9 Art J. 1875 29

10 Luckhurst op. cit. 135

Cole then turned his energies to the promotion of a private company which would be connected with local authorities in the disposal and utilisation of sewage. This scheme continued until 1879, causing him to move his home to Birmingham, and later to Manchester, for a period. The scheme ended in failure. Cole lost a stone in weight in six months¹, and had to be saved from acute financial embarrassment by a loan from Bartley.² Donnelly's "cool judgment and advice" were a "great comfort":³ with the Redgraves and Granville he held shares in the Company,⁴ and after agreeing "to be a Director if he was not forbidden"⁵, had been so appointed.⁶ With the collapse of his schemes, Cole turned for help to Granville. He had, he said, "resolved to die in harness", and he asked for a post with the Commissioners which did not materialise.⁷ The Albert Hall, another of his promotions, led a most precarious existence in his life time. It was used, among other things, for an "International Exhibition" of foreign wines in 1874,⁸ and in 1876, when the Company asked for a reduction in rateable value, the Engineer noted that "Mr. Cole is not precisely the man to consult by those who wish to receive their own with interest".⁹ "He was not a skilful or a cautious financier" said a man who knew him well, in an otherwise very favourable evaluation.¹⁰ "You would be the worst possible banker", his friend Granville told him, when he refused to join Bartley's Savings Bank Scheme, of which Cole was a Director.¹¹ This then, was a field in which Cole's theory was stronger than his personal practice.

vi) General character

The "tendency to sacrifice popularity to efficiency" should be strictly controlled, Northcote told Cole when he first took up office.¹² Cole had, however, made up his mind "to be abused and like it", he told the Consort.¹³ The obvious satisfaction with which he noted some of the disparaging remarks already quoted, bears out his friend Redgrave's belief that he "gloried in strife".¹⁴ On one occasion he told Huxley that he had often "been sent to the

1 Cole MS Diary 13 November 1879

2 Ibid. 10 July 1879

3 Ibid. 7 June 1879

4 Ibid. 9 February 1877

5 Ibid. 27 April 1879

6 Ibid. 27 May 1879

7 Ibid. 2 October 1879 and MS letter Cole to Granville 25 October 1879.

8 Ath. 6 June 1874

9 Engr. 11 February 1876

10 Wood op. cit. 358

11 MS letter Granville to Cole 28 March 1875

12 MS letter Northcote to Cole 27 February 1852

13 MS letter Cole to Grey 27 January 1852

14 Redgrave op.cit. Diary 8 July 1860

Devil, but he won't have me".¹ Many saw him as a virtual "King". To W.H.Dixon, Editor of the Athenaeum, he was the "King of South Kensington",² and Lord Elcho talked of "calling at your kingdom the other day".³ "He was commonly known as King Cole", believed Sir Charles Dilke.⁴ As the archetype of the creative bureaucrat, he virtually refounded the Society of Arts, rescuing it, according to one of its historians, "from a state of impotence and insignificance" and raising it "to a state of prosperity and influence".⁵ "His irrepressible energy ... Keenest intelligence and never failing diligence ... his courage and audacity in pursuit of his purposes",⁶ and his capacity to impose his will on architects⁷ and others, made it inevitable that he should be a despot, but a necessary one. Three years after his death, one writer believed that "because of his influence ... the Department remains ... one of the most human of government departments".⁸

Punch, always ready to attack the sham and the pompous, had a sneaking regard for him. Its "Exhibition Verses" of 1862 talked of "the mighty name of COLE", and asked "who after COLE has eyes to condescend on Bishops, Ministers, Lords".⁹ It hailed him as "old King COLE" and talked of his "royal sway", which "extended from Boilers to Dishcovers", (A reference to Fowke's unfortunate Dome)¹⁰ According to the paper, he "pooh poohed the Privy Council" and "laughed Royal Commissioners to scorn". It was predicted that, despite the charges about the Paris Exhibition of 1867, "explanation vouchsafed he none" but "King COLE still King will be".¹¹ "Much excitement prevailed ... among the COLE-optera", when Punch implied that he was bidding to take over the Natural History collections.¹² However, South Kensington had "Treasures in this cave of COLE'S".¹³ When the Albert Hall was opened, Punch said, in a general defence, of several verses,

"If with beauty JOHN BULL to imbue till his clumsy hand own Art's control
Be things any fellow can do, it's easy to laugh at KING COLE!"¹⁴

1 MS letter Cole to Huxley 13 May 1870

2 MS letter Dixon to Cole 2 October 1860

3 MS letter Elcho to Cole 11 August 1860

4 Gwyn and Tucswell op. cit. I 7

5 Wood op. cit. 358

6 Ath. 22 April 1882

7 MS letter A.W. Donaldson to Cole 3 December 1867

8 Ath. 5 February 1885 (Review of Cole's posthumous autobiography by Rev. Newsom Price)

9 Pch. 3 April 1862

10 Ibid. 7 June 1862

11 Ibid. 9 March 1867

12 Ibid. 27 August 1870

13 Ibid. 28 March 1868

14 Ibid. 31 March 1871

The journal's last reference to Cole, in talking of a scheme to select copyists of the Raphael cartoons by examination, warned of the dangers of steam from its favourite Boilers, but said "Mr. COLE's arena is the impossible".¹

The "occasional high-handed manner which made him many enemies",² the fact that "he was not an easy man to get on with",³ the belief that he "moved along, treading on many toes (but revolutions are not effected by rosewater)",⁴ all suggest a difficult nature. "Delay was hateful to his impatient soul", believed the Secretary of the Society of Arts, who knew him well. "He usually got what he wanted ... caring very little for unpopularity in the process!"⁵ "It is difficult to dismiss the sense of insecurity which his name inspires", said the Engineer, when it heard that he was involved in schemes for a new Patent Museum in 1874, and it hinted that his "retirement" from the Department was one in name only.⁶ He could cause distrust even when he was being most innocent of guile. The Headmaster of Eton, whom he visited with an introduction from the Consort because he was interested in the mode of Art teaching in the school,⁷ "looked on the visit with suspicion and wondered where it would end".⁸ The Art masters were certain in 1864 that the abolition of the certificate allowances was a direct breach of faith, carried out because it suited Cole's purpose when there were enough qualified teachers.

He was consistently assailed up to 1864 by the Art Journal. He had "pocketed £3,400 from the Great Exhibition", and the campaign to reform the Schools of Design was part of "a monstrous attempt at a new job".⁹ He was a "dictator, lacking in knowledge of the needs of manufacturers".¹⁰ "This ominous name" suggested "evidence of another complicated job", when he became Honorary Secretary of the Horticultural Society.¹¹ He could be singularly blind in some things. He argued in 1864, on the question of teachers' emoluments, that any man who worked hard "had no need of pension",¹² yet when he retired on a pension of £1000 a year, immediately took another highly paid post. He seems honestly to have believed that "the spirit of universal competition" ruled the Department when it abounded with his relations.

1 Pch. 25 May 1872

2 Ath. 22 April 1882 (Obituary)

3 Noted by Redgrave as told to him by Henry Labouchere in 1852
(Redgrave op. cit. 64)

4 Bowring op. cit. 565

5 Wood op. cit. 359

6 Engr. 23 January 1874

7 Cole MS Diary 9 November 1852

8 MS letter Phipps to Cole 11 November 1852

9 Art J. April 1852

10 Ibid. February 1858

11 Ibid. June 1864

12 S.C.S.A. A. 570

He could however be "a capital companion and a valuable friend".¹ Redgrave in particular valued their friendship. They "never quarrelled in twenty three years of office".² Cole was "ready at all times to back up and prompt my suggestions,"³ their relations had been "most harmonious",⁴ and they "always worked well together".⁵ Cole allowed Redgrave to remain ignorant of his intervention in the matter of the appointment of the artist to the post of Keeper of the Queen's Pictures.⁶ "Cole introduced me as the Pope of South Kensington, infallible in all matters of Art, to which I replied that I was like all the other Popes", Redgrave recorded when the King of the Belgians visited the Museum.⁷ (The doctrine of Papal infallibility was promulgated in 1870). On one occasion Cole could suggest that an increase in salary which he had been promised should go instead to Bowler and Robinson.⁸ Even after years of strife with the latter, he could shake hands when they met at the Academy.⁹ Granville's amused tolerance lasted over thirty years. Cole had another great friendship with Donnelly, on whose behalf he made some most embarrassing interventions. He praised him publicly as "the youngest man with the oldest head I know".¹⁰ When Donnelly became Head of the Department in the last months of Cole's life, the older man recorded "Right comes right after years of waiting".¹¹

There is little evidence to indicate that Cole was guided by any prolonged study of education in a theoretical sense, or of the "political economy" to which he referred so often. As a young man he was a friend of John Stuart Mill, and contributed one signed article to his Westminster Review.¹² There are references in the Diaries of "reading Mill" or "discussing Mill" from time to time, and Cole would appear to have been in general sympathy with Mill's views on state responsibility tempered by consideration for the individual. There is only one reference to any consideration of the theories of Comte. At the time of Huxley's first battles with the Positivists, Cole recorded that he

1 Ath. 22 April 1882 (Obituary)

2 Redgrave op. cit. 64

3 Redgrave Diary (op. cit.) 5 August 1859

4 MS letter Redgrave to Cole 2 May 1881

5 MS letter Redgrave to Cole 20 May 1867

6 MS letter Redgrave to Cole 16 May 1881 (the last letter)

7 Redgrave Diary 27 November 1869 (op.cit.)

8 Cole MS Diary 22 March 1858

9 Ibid. 2 January 1875

10 Cole Miscellanies 20 October 1873 (Address at Hanley)

11 Cole MS Diary 19 January 1882

12 The Decoration of Westminster Palace. Westminster Review XXXVIII 168-193 (July-October 1842)

had been reading an article in the Edinburgh Review on the subject and noted "Worship of Mother, Wife and Daughter"; with no further comment.¹ It was a much less cerebral writer, Samuel Smiles, who engaged Cole's real admiration. "I don't think any of you know what is meant by education", Froude, the historian, told him.² If he meant that Cole preferred to proceed pragmatically rather than theoretically, he was correct.

Cole's political views are hard to discover. As a young man, he wrote pamphlets for, and was a member of the Anti-Corn Law League.³ He once congratulated Gladstone on the size of his majority,⁴ and his friend Granville was a leading Liberal of his day. Cole's alliance with the Consort, however, meant that much early support came from the Conservatives, and he received his K.C.B. from Disraeli.

Cole was always ready to accept responsibility. When Braidwood, Head of the London Fire Brigade, warned him that evening opening of the Museum with gas lighting might "blow up the whole place and bring it tumbling about your ears", he pressed on.⁵ His energy, his width of interests, and the tenacity with which he clung to his principles in the face of criticism, were responsible for much of the great development in scope and influence of the Department. However, the Department's opponents were largely motivated by dislike and fear of Cole. Just as the "Royal connection" clung to Cole long after it had ceased to be of effective value, so Cole's reputation attached itself to the Department for many years after he had withdrawn from the conduct of its affairs.

Richard Redgrave

The delay in the negotiations over Redgrave's pension meant that he retired, at 71, a year after Cole, the younger man. "To recount his services ... would be to write the history of the Art Department" said the Treasury Minute which granted him £750 a year.⁶ (The Athenaeum thought that this was "by no means magnificent"⁷, but Redgrave, in thanking Cole for his help, told him that it was "in every way satisfactory".⁸) In recording the tribute, Redgrave noted that "I have no wish to disparage Cole ... but it is all of my framing."⁹ He did however always acknowledge Cole as the administrator of the system, and

1 Cole MS Diary 5 July 1868
 2 MS letter Froude to Cole 12 July 1871
 3 Cole op. cit. II 100
 4 Cole MS Diary 30 April 1880
 5 R.C.T.I. A. 2911 (Cunliffe Owen)
 6 D.S.A. 23rd Report xi
 7 Ath. 4 September 1875
 8 MS letter Redgrave to Cole 27 August 1875
 9 Redgrave op. cit. 334

in retirement once addressed him as "my old and respected chief".¹ Redgrave disputed a claim in Burchett's obituary that he was "the principal conductor of the vast scheme of Technical Education in drawing and decorative Art works",² and credit was eventually given to him, while it was stated that Burchett's influence had been through the masters he had trained.³ He also wrote to Robinson at one time and refuted his claim that he had ever been Art Superintendent.⁴

He accepted his retirement much more philosophically than did Cole. While he found "many bricks drawn out of the edifice of teaching I constructed"⁵, he refused to trouble himself with changes "with which I have no right to meddle", and added, perhaps as a gentle reminder; "I know that long occupants of office often think that no one can carry on the work as they did".⁶ "Our successors entering on the fruits of our labours and appropriating them as their own", did, however, cause him uncharacteristic annoyance, and he believed that he and Cole had "left in good time, as we would not have liked to have our views and opinions doubted by the Lord President through a third party".⁷ (This was presumably a reference to Sandford's intervention.) He was snubbed by Owen when he recommended Horsley⁸ as Poynter's successor.⁹

Redgrave was a much more gentle person than Cole. "I was never able to put my case as it deserves, although I was always bold enough for others", he told Cole.¹⁰ He identified himself with Cole's policies absolutely, but he never seems to have caused the same enmity. (He had "lent himself to Mr. Cole, although none could speak with greater force of his unfitness", charged the Art Journal at the onset of their collaboration.)¹¹ They were examined together before the 1860 and 1864 Committees, and appeared consecutively before the Committee on Art Unions. The Art world probably accepted him more readily than it did Cole because of his membership of the Academy. (He entered in 1851 and was the oldest member at the time of his death in 1888.) He had fewer children than Cole. His son Gilbert was associated with the Department, serving in the Drawing Office, then working as an engineer for

1 MS letter Redgrave to Cole 15 March 1877

2 Ath. 5 June 1875

3 Ibid. 3 July 1875

4 MS letter Redgrave to Cole 28 December 1877

5 MS letter Redgrave to Cole 27 December 1876

6 MS letter Redgrave to Cole 18 January 1877

7 MS letter Redgrave to Cole 15 February 1878

8 Horsley was Cole's collaborator on the first Christmas card.

9 Cole MS Diary 29 October 1881

10 MS letter Redgrave to Cole 7 July 1873

11 Art J. April 1852

Cole's Sewage Company, returning as an Inspector, just before his father's death, and rising eventually to the position of Assistant Secretary.¹

Redgrave refused the K.C.B. when it was offered to him in 1869.² (This would have ante-dated Cole's elevation by six years).

Redgrave was prophetic when he ~~recorded~~ in 1859 "I am somewhat proud of my system ... I may perhaps never get the credit for it".³ He was certainly appreciated by his official chiefs, as the tributes show. In the end, while he may never have received full public appreciation, he conversely suffered none of the contumely showered on Cole. It is perhaps the best tribute to Cole's private, as distinct from public, persona, that he should have gotten so well with such a pleasant and likeable man.

1 D.S.A.O.B. 25 June 1900

2 D.N.B.

3 Redgrave op. cit. Diary 5 August 1859.

CHAPTER · FIVE

THE END OF THE OLD ORDER

1882 - 1900

- a) "Ministry of Science" Functions
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a) "Ministry of Science" functions

The brief role of the Department as the organ for the administration of grants for research was ended before the final period of its history began, but it continued to exercise certain functions, in addition to its primary and more directly educational ones. It acted as the organisation for liaison with international scientific bodies. Donnelly was a member of a Committee which organised the participation of the United Kingdom in the work of the International Geodetic Association,¹ Abney was the Departmental delegate to the Paris Electrical Units Conference which defined the ohm, the volt and the ampere, and the Department organised the British Contribution to an Ornithological Congress in Vienna and an Electrical Exhibition in Turin.² It circulated information from foreign Conferences and Exhibitions.³ At home, Donnelly was a member of a Committee which attempted to persuade the railway companies to adopt the 24-hour clock eighty years before this was successfully introduced.⁴ The Physical Society was provided with accommodation for its meetings, in the Science Schools, from its inception after a meeting there in 1873⁵ until it decided in 1894 that "Burlington House was more central".⁶ The Department continued to be associated with the Solar Physics Committee for the rest of its existence, and in the first month of the new century Lockyer still hoped to be able to prove a connection between sun-spots and the weather.⁷

b) Institutions and Instruments

The Department continued to be ultimately responsible for the central Institutions whose developments are recorded later in the work.⁸ It carried on its organisation of the encouragement of education in Science and in Art through its basic system of "self-support aided by payment on results", but, as will be detailed, as the "self support" grew, the payments system declined and was eventually given up.

c) The machinery for provincial encouragement

i) Minor amendments to the Science scheme

While there were amendments, as the century progressed and as the sheer volume of the Department's business increased, designed to throw a greater burden

1 D.S.A. 31st Report xxiii
 2 Ibid. xxiv
 3 D.S.A. 33rd Report xxii
 4 D.S.A. 34th Report 10-24
 5 Nat. 11 December 1873
 6 Ibid. 27 September 1894
 7 Sc. H. January 1901 XXI 121
 8 Chapters VII and IX

of support on other shoulders, the basic system of payments on results continued almost to the very end of the period. Defences had still to be made against charges that standards of examination were raised arbitrarily, to keep payments within a previously decided limit, although it was admitted that standards were progressively raised.¹ The Science estimates for payments were overspent in two successive years. In the first, 1886, there was a deficit of £10,000.² ("I gave the Treasury twenty-four pages and they took off not a cent", Donnelly told Huxley³). The next year, estimates were short by £6,000, because of an unexpectedly rapid increase in the number of entries.⁴ It was obviously time to apply more stringent controls. "Subjects such as Agriculture, which had previously been treated extremely lightly", had their standards raised in 1888, and there was an even stricter enforcement of the rule limiting the number of subjects per student on which payment would be made.⁵ This caused "an outcry" from both larger⁶ and smaller⁷ institutions, each group of which claimed that it was being discriminated against.

The great increase in entries for the "new" subject of Agriculture had in fact caused a Minute to be issued in 1884 which refused payments on "Sciences manifestly inappropriate and useless to a locality".⁸ In 1888, in development of this, regulations were issued which required the submission of certificates to the effect that students who entered examinations in Mineralogy, Nautical Astronomy, Navigation and Agriculture "would engage in those trades or become teachers".⁹ There was a discontinuation of the system of prizes for elementary examinations from 1883, the money being used instead for the establishment of scholarships.¹⁰ (There was no reduction in entries the following year, though this had been predicted in some quarters¹¹).

ii) Changes in the Art scheme

Mounting criticisms of its system, recorded below,¹² led the Department to make certain modifications in the last decade of its existence. It followed the recommendation of the Technical Instruction Commission¹³ that

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- 1 D.S.A. 32nd Report xi
 - 2 Ibid. ix
 - 3 MS letter Donnelly to Huxley 13 February 1885
 - 4 D.S.A. 33rd Report ix - x
 - 5 D.S.A. 36th Report ix
 - 6 S. and A. September 1887
 - 7 Ibid. March 1889
 - 8 D.S.A. 32nd Report 2
 - 9 D.S.A. 36th Report 1
 - 10 D.S.A. 31st Report ix
 - 11 D.S.A. 32nd Report lx
 - 12 Chapter VIII section(e)
 - 13 R.C.T.I. 520, 537

finished products, as well as the designs on which they were based, should be submitted to the National Competitions,¹ thus preventing students from being "like generals who never fought".² Examiners' Reports showed a greater tendency to stress the need for "a practical direction to studies".³ The "enormous and increasing number of works executed, and the limited accommodation in for examination", was one factor in a decision to exclude "unimportant" and "preparatory work" from the works which had to be submitted to South Kensington for examination.⁴ This intention was at first misunderstood,⁵ and the Department had to disclaim any intention to reduce grants.⁶ The appointment of District Inspectors made it possible to introduce this much needed reform.⁷ The new regulations, once understood, received general acceptance,⁸ and on balance, there was more expenditure in grants rather than less.⁹ "Beneficial results" on the Advanced Works sent in were later reported,¹⁰ and there was a marked decline in the number of works submitted,¹¹ which must have brought great relief, and an opportunity for more careful scrutiny, to the Examiners.

The introduction of one examination only, in 1892, in place of the previous Second and Third Grade examinations, with a further examination for Honours,¹² further simplified the system of administration, although it brought a complaint that teachers' difficulties were increased.¹³ An "Alternative Syllabus of Drawing for Evening Schools", which would not involve a repetition of work done in day Elementary Schools, was brought out in 1893.¹⁴ The Art organisation was affected by the end of the system of payments on results, which will be recorded, so that the "decentralisation and greater local control" for which critics had argued¹⁵ was eventually achieved.

iii) The handing over of responsibility for "elementary" Science

By 1891 the Department was in a position to be able to throw more of the financial burden of encouragement on to the newly enriched County and

1 Art J. 1895 287

2 R.C.T.I. A. 2071 (Legros)

3 Art J. 1899 281

4 D.S.A. 35th Report 223, 401

5 Art J. 1888 270

6 S. and A. March 1888 and D.S.A. 35th Report xx

7 Chapter X section (c)(v)

8 S. and A. December 1888

9 D.S.A. 36th Report ~~xx~~

10 D.S.A. 37th Report 90

11 Table XXI

12 D.S.A. 39th Report xxvi

13 Hd. V (1892) 1270 (Talbot)

14 D.S.A. 41st Report xxiv

15 N.A.A.A. 1890 Report 1 - 21 (Hodgson) J.C. Robinson N.C. December 1898

County Borough Councils, which, with the accession of the "Whisky Money" in 1890, which will be recorded,¹ were in a better position to support more elementary work, particularly in Science. It was, therefore, announced that there would be no payments on Class II passes in the Elementary Examinations from 1892. There was a second and equally compelling reason. It was admitted that the machinery of administration of the examinations was strained "possibly to the point of impossibility". In 1884, when the Department announced that because of the "Goffin frauds"² papers were timed to arrive by the last post before an examination, 5,072 packets of papers had in fact been posted.³ By 1891 this figure had risen to 20,790 packets. As a result of the very great increase in the volume of entries, "awards" were "not being announced, and payments made to teachers, as soon as could be wished". "The enormous size of the examinations" was given by Donnelly as the chief reason for change.⁴ It had become "a business almost impossible to manage", Cranbrook told the Lords.⁵ At the same time that this restriction was announced, it was stated that the time had come to reduce prizes considerably. "The time has passed when such prizes from a Central Department, which must entail a disproportionate cost and delay in administration, were justified by the necessity of stimulating Science and Art Schools", it was said. A further move was the suspension of grants in aid of the purchase of apparatus and fittings.⁶ "There are still liberal grants, but some have been dispensed with while the Whisky Money is in force", Acland told the Commons four years later.⁷

The changes met with a mixed reception. Acland told a questioner in the Commons that, far from impeding the movement for Technical Education, as he suggested, it would encourage advanced instruction.⁸ "The new system is objectionable because it will lead to fluctuations", said the Headmaster of Birkbeck College.⁹ A teachers' deputation to the L.C.C. argued that there would be a tendency to refuse to accept artisan students "unless they were certain to obtain Firsts".¹⁰ The move was, however, welcomed by Nature "as a move to stamp out farming".¹¹ The local authorities would now be made more

1 Section (d)(v)

2 Chapter XI section (B)(h)

3 D.S.A. 31st Report 61

4 R.C.S.E. A. 1078

5 Hd. I (1892) 428

6 D.S.A. 39th Report xxi-xxii, 1, 6

7 Hd. XXII (1895) 1132

8 Hd. XVIII (1893) 1031

9 S. and A. April 1892

10 Ibid. January 1893

11 Nat. 24 August 1893

aware of their responsibilities, believed R.H. Gregory,¹ and his friend and old fellow student, H.G. Wells, welcomed the removal of the temptation to teach to low levels.² The increased prosperity of the "Councils", however, was not an unmixed blessing, as will be seen.³ Faced by their competition, and now lacking even more in aid, many Schools of Science and Art closed their doors.⁴

iv) Increasing criticisms of payment on results

The great debate on the question of "pure" or "applied" studies continued throughout the period,⁵ as did the complaints that the Department's examinations system encouraged "cram", that its syllabuses were based on out of date precepts, and that the examinations themselves were becoming increasingly difficult to pass.⁶ While the Department was not mentioned in a memorial on "The Sacrifice of Education to Examination" in 1888,⁷ or at a meeting of the British Association at which it was "agreed that examinations are universally abused yet firmly established", in 1893,⁸ the whole system of payments on results was being increasingly subjected to questioning. Roscoe was prepared to suggest that the Department should take over the City and Guilds system, but he stressed that "payments on results should be abolished, as unsuited to Technical Instruction".⁹ Science and Art, however, believed that the system would "never be completely abolished".¹⁰

Two events in the early part of the last decade of the century foreshadowed the end of the Department's cherished system. The first was the abandonment of the system in the Schools of the Education Department, as a result of the recommendations of the Cross Commission.¹¹ The second was the decision of the City and Guilds to discontinue such payments on its examinations after May 1893.¹² There was "no diminution in the numbers of candidates", it subsequently reported, and it referred to "the assistance of the local authorities"¹³, without specifying what must have been the major factor in its decision, the greater aid to teachers' salaries which they could now bear.

1 Nat. 27 September 1894

2 Ibid. 21 December 1893

3 Chapter VI (j) and Chapter VIII (b)

4 D.S.A. 41st Report xii

5 Chapter VI section (g)

6 Chapter VI section (k)

7 N.C. November 1888

8 Engg. 27 October 1893

9 Nat. 26 December 1889

10 S. and A. February 1891

11 Hd. XVII (1893) 561 and R.C.S.E. A. 11871 (Hart Dyke)

12 Nat. 10 November 1892

13 Ibid. 26 April 1894

The Department continued to set its face firmly against capitation payments. If such a system were introduced, "opportunities and temptations to fraud would be greatly multiplied, and control over expenditure greatly reduced", it said, when handing over the responsibility for less advanced work to the Councils.¹ The capitation grant which was part of the system in the Organised Science Schools was quoted by Kimberley, the Lord President, in a refutation of the charge that the Department relied "exclusively on payments by results". He expected that "the better organisation of the local authorities" might enable the Department to extend the capitation system, but he believed that this would be "the work of time".²

v) The last ditch

The specific charges on the aspects of the Department's work in "secondary" schools are recorded later,³ but the whole system was in fact under attack. Before the Secondary Education Commission, Donnelly summed up his views on the system which he had inherited from Cole. He had "never heard of a workable substitute", believed that the system "allowed ... with absolute fairness ... the allocation of sums on the basis of work done ... without interfering in management or internal arrangements," and said that there was "no invidious choice ... as to whether a School is aided or not". The appointment of additional Inspectors would make the system more efficient, he agreed, but this "would not diminish the value of individual examination", and there would be difficulties of standardisation, he pointed out. Nor, he thought, could Inspectors "be expected to be expert in all branches of Science" which, in their own spheres, Examiners were. He did, however, admit that the "Councils" were in a better position than the Department to control a capitation scheme.⁴

"Some dissatisfaction with payment on results" was admitted by Abney, who was personally in favour of inspection, if the inspectors were available and the Treasury would agree to their appointment. He had to agree that the yearly £25,000 which was spent on the administrative costs of the system would pay for "a great deal of inspection". He was quite firm, however, on the retention of examination for Advanced work.⁵ Examinations helped students to

1 D.S.A. 39th Report xxi

2 Hd. XVII (1893) 561

3 Section (h) (iii) and (iv)

4 R.C.S.E. AA. 1108-1151

5 Ibid. AA. 1277-1297

know what progress they were making, and assisted the Department with standardisation, argued C.A. Buckmaster. They gave a particularly good indication of teaching ability, he believed, "since the unsuccessful drop away".¹ "Where there is no examination, teaching will be poor and inefficient," Gilbert Redgrave categorically stated.²

William Garnett, by now Secretary of the Technical Education Board of the L.C.C., and no friend of the Department, believed that "inspection without examination would be unsatisfactory, but examination without inspection is worthless".³ The system was "admirably adapted for statistical purposes", but was universally condemned, charged the Secretary of the School Board Association.⁴ The Commission, in the section of its Report which dealt with this aspect, talked of "correcting the evils of payment on results" and "the encouragement of cram", and, as will be noted elsewhere,⁵ recommended its replacement in Secondary Schools by a system of grants based on capitation and inspection,⁶ which was carried into effect.

The whole question, as has been said, turned on the alternatives of the adoption of such a system, or a continuation of the old. The Department instead, for a time, gave Schools the option of choosing either. Capitation was allowed to qualify for grant, subject to satisfactory Inspectors' reports, from August 1895.⁷ This was not universally popular. Only 593 of 2,443 "Science Schools" chose the capitation-inspection system in its first year,⁸ possibly because they feared the results of being "subordinated to Inspectors with varying standards".⁹

vi) The final renunciation

The Secondary Education Commission had struck a death blow to the system, The final quietus was administered by the Committee on the distribution of grants to Science and Art Schools, of which Donnelly was a member, and which met in 1896 and 1897. The recommendation in its Report, that local authorities should be allowed to assume full responsibility for Science and Art classes in their areas, was based on a unanimous agreement from bodies who submitted

1 R.C.S.E. AA. 10187-10188, 10290

2 Ibid. A. 10319

3 Ibid. AA. 2809 and 2837

4 Ibid. AA. 9857 and 9942 (C.H. Wyatt)

5 Section (h) (iv)

6 R.C.S.E. 28, 181, 257

7 D.S.A. 43rd Report 8

8 D.S.A. 44th Report 5

9 Engg. 26 February 1897 (Letter from the Head of the Glasgow Technical College)

written evidence that the system as it stood should be replaced.¹ The Department's functions would be limited to inspection which would "check that Schools were suitable ... to receive aid from public funds".² In 1898, therefore, in the very last months of its existence, the Department issued rules which compelled all Schools to receive attendance and inspection grants. Although payments were to continue on Honours examinations, these would cease after 1900.³

The Engineer, which had been fulminating about "funds broadcast on superficial instruction which produces parlour engineers and amateur artisans",⁴ and saying "the Department is noted for the arrest of thought and imagination"⁵, had believed "an appeal for liberalisation would be in vain".⁶ When the final abolition was announced, it "looked in the Directory for indications of forgery ... Rank heresy ! Is the very Pope of the examination system to be the first renegade?"⁷ Engineering believed that the examinations, devoid of the "cash element", now demanded independent thought, and welcomed the change, and said that "all fair critics admit that the examinations have always been of a high character".⁸ The abolition of payments on results diminished the numbers presented for examination⁹, but only in a few cases was there any reduction in grant, the Department reported.¹⁰

While the payments had gone, the examinations continued until the First World War, which would suggest that they had a value to students and to teachers as evidence of the successful completion of a course. The final decision to give up a system which its officials had invented, which had spread through the whole field of public education, and which it had defended for so long, was forced upon it by the changed circumstances of the age. The increased availability of men who could usefully act as Inspectors in the "modern" sense of the term had made possible the adoption of a more "personal" system. The prosperity of the "Councils", with their Whisky Money, which could enable them to open Schools and pay salaries to teachers, had replaced the need for "private venture stimulated by incentives" which had first had to be relied upon. The growing complexity of industry had brought forth new

1 P.P. (1898) XXII (439) Appendix

2 P.P. (1897) XXXIII (42) 12

3 D.S.A. 45th Report x

4 Engr. 27 May 1898

5 Ibid. 12 August 1896

6 Ibid. 3 March 1899

7 Ibid. 1 September 1899

8 Engg. 8 October 1898

9 Table IV

10 D.S.A. 46th Report v

demands for students who had received more advanced training than the Department's funds could aid. A whole new generation had enjoyed a more sound basic "elementary" training since 1870, and, particularly, since the introduction of "specific subjects" from 1882. That the officials of the Department, in particular, Donnelly, had insisted upon the retention of the system beyond the point where it could realistically have been seen to have served its purpose, does not alter the fact that great good had come from its development.

d) Local provision and central adjudication in Technical Education

Renewed interest in Technical Education came with the trade depression of the late 1880's and the ever-increasing competition of the newer industrial countries, in particular, Germany. (Manufacturers "rarely if ever give the lack of Technical Education, in the South Kensington sense of the phrase, as the reason for the poor state of trade", sneered the Engineer,¹ and a writer to the same journal could say that "if industry could do away with all the Trade Union restrictions, this would be better than all the South Kensington certificates"².) These views aside, one consequence was the formation of a National Association for the Promotion of Technical Education, which held its first meeting at the Society of Arts, with Lord Hartington in the chair: Granville, Huxley, Mundella and Samuelson were among those present.³ This body demanded increased state aid in the achievement of its aims: the basic problems were which Department of the state should administer such aid, and which local authorities should receive it.

The Royal Commission on Elementary Education, it could have been argued, went beyond its terms of reference when it strongly recommended that "technical education should be under the general management of the "Education Department and not the Science and Art Department": it added that the stress should be on the study of theory, and not of practice.⁴ Two years before, Playfair, as Vice President, said that since half the cost of elementary education, and almost the entire costs of "the education of artisans", was borne from "Imperial Funds", he agreed with the Royal Commission on Technical Instruction that local effort should provide the support,⁵ Witnesses before that

1 Engr. 23 September 1887

2 Ibid. 21 October 1887

3 Nat. 7 July 1887 and Chapter XVII (b)(iii)

4 R.C.E.E. section 148

5 Hd. CCCII (1886) 1755

Commission had argued for rate aid.¹ The powers which did exist under the Museums and Public Libraries Acts, were very rarely used.² The Conservative Salisbury administration was prepared to allow local rate aid for the purpose, and furthermore, to permit it to be applied in aid of the education of "scholars beyond Standard VI." The Department was chosen to administer the government aid, and, in effect, to be the arbiter in questions of dispute.

ii) Resistance to an extension of the Department's powers

In introducing the government's own Technical Education Bill in 1887, after a private member's Bill sponsored by Roscoe had been withdrawn³, Hart Dyke, the Vice President, referred to foreign competition and stressed that there would not be "education in trades". He said that "local authorities, School Boards or Town Councils" would exercise local control. The Department would administer the government aid, he said, "because its educational capacity has been thoroughly well tested", and he knew that it could "conduct every detail and carry out the work with economy and efficiency".⁴ The Bill foundered on three counts. The first was the opposition engendered by fears of widening of the Department's powers. These had found public expression in the columns of the Engineer: "South Kensington appears on the scene ... an extension of its powers is to be regarded with dread":⁵ "Teaching Science in the South Kensington sense ! God save the mark ! " ... the Bill is being forced through the House".⁶ "It favours the bookish ... its 'red tapism' is to be feared ... I know its methods from bitter experience".⁷ The second cause of failure was the fear that an increase in the powers of the School Boards would lead to a corresponding diminution in those of the voluntary schools. The third factor was the strong belief held in many quarters that if there were to be increased instruction at all, then the industrialists who would ultimately gain most personal benefit should pay for it.⁸ Reference was made to all these issues in the debates on the Bill.⁹ Although Hart Dyke told a deputation from the N.A.P.T.E. that there were good prospects for the Bill,¹⁰ it was withdrawn,¹¹ to the regret of Nature.¹² (However, while similar objections were raised to a Bill for Technical Education for Scotland, this Bill did become law.¹³)

1 R.C.T.I. AA. 914-917 (Arnoux) A.970 (Wedgwood)

2 T.Greenwood Free Public Libraries (London Simpkin Marshall 1886) XX

3 Hd. CCCX (1887) 160

4 Hd. CCCXVII (1887) 1466-1473

5 Engr. 29 July 1887

6 Ibid. 12 August 1887

7 Ibid. 19 August 1887. (Silvanus P.Thompson of the City and Guilds Institute)

8 Ibid. 5 August 1887 ("C" of Westminster")

9 Hd. CCCXVIII (1887) 1828-1893

10 Nat. 4 August 1887

11 Hd. CCCXIX (1887) 1520

12 Nat. 25 August 1887

13 Hd. CCCXVIII (1887) 1938-1952

The great champion of the Department once more was Huxley. After Donnelly had asked him to use his influence to get an article published in The Times,¹ even Nature thought that it was "too favourable"² on its appearance.³ Huxley believed that the Department should be given the power to "decide ... any project... of the character contemplated by legislation", since "its usefulness has been, and is, immense".⁴ There should however be a limit to its responsibilities: the major share of costs "should be borne by local effort ... to meet local needs".⁵ Despite the death of his daughter, he did not accept Donnelly's suggestion that a paper he had prepared for a Manchester meeting of the N.A.P.T.E., to which the Engineer would go with him, should be read for him.⁶ Donnelly hoped that the speech would be published in the Nineteenth Century as "the greatest help at present",⁷ and later "sat up late reading proofs of the article",⁸ which was published as "The struggle for existence". The Department was "a people's University", Huxley argued, and an education rate would be "a war tax levied for ... defence"; the School Boards, however, had "their hands full with elementary education". The Department's only function under the abortive Bill had been to decide whether schemes proposed by local authorities were valid: it had had no powers of initiation. It was not possible to devise a legal definition of Technical Education, he thought, "nor commendable to leave it to the Auditor General to be fought out in the Law Courts".⁹

The Department had other supporters. "The unqualified success of the Department's system" was quoted in its favour at a meeting of the British Association in 1887, when the question of responsibility was discussed.¹⁰ The industrialist, Lord Armstrong, "most heartily concurred" with Huxley's commendation of the Department. "It would, he said, "be wise to expand in the same unpretentious and economical line of action".¹¹ "It would be generally injurious if the Department took over Technical Education", countered a conference of London teachers, however.¹² "The only result ... will be an

1 MS letter Donnelly to Huxley 26 January 1887

2 Nat. 3 February 1887

3 Times 31 January 1887

4 Copy of notes by Huxley, made by Henry Cunyngname. (Huxley correspondence 42,52 undated. Catalogued as 1877, but there was no "contemplated legislation" that year.)

5 Times 21 March 1887 (letter)

6 MS letter Donnelly to Huxley 23 November 1887

7 MS letter Donnelly to Huxley 6 December 1887

8 MS letter Donnelly to Huxley 10 January 1888

9 N.C. February 1888

10 Br. Assn. 1887 Report (S.J. Watherstone)

11 N.C. July 1888

12 S. and A. September 1887

increase in School Board rates and the numbers of officials in the Department ... the reputation of South Kensington is such that this cannot be viewed with equanimity", charged the Engineer, returning to a sustained attack.¹ The Department was "a vast chaotic organisation of which the taxpayer knows nothing", and there was "ominous silence on its benefits".² Huxley and "South Kensington" had a "vested interest".³ The Department's "teaching" was "of little real value".⁴ Huxley was "now hopeless on Technical Education" and too involved with "that mischievous institution at South Kensington".⁵ "Let all be educated by all means, but do not imagine that industrial supremacy depends upon all being brought to the South Kensington pitch", argued the journal.⁶ It reported with obvious pleasure a speech by Thompson (whose "red tapism" remark of the previous year has been noted) at the Finsbury College of the City and Guilds, in which he railed against "paper examinations" and where a resolution was passed against a hand over of any further power to the Department.⁷

In the middle ground of the dispute were those who were by no means convinced that Technical Education facilities needed extension. Only a small proportion of his workmen availed themselves of classes organised at his Elswick-on-Tyne factory, said Lord Armstrong, by no means an opponent.⁸ "The much abused South Kensington Department", the City and Guilds, and secondary schools and colleges" provided ample scope already for the few who needed further education, argued an anonymous writer, who thought that "industrial enterprise should depend on personal enterprise and energy rather than on grants".⁹

iii) Continued attempts

Efforts were continued to secure legislation. Two further private members' Bills were dropped in February 1888, and a further government measure was introduced in May. Despite a denial¹⁰, that Bill was withdrawn in July.¹¹ There was no intention to extend the Department's powers: local areas would decide local needs, claimed Bartley,¹² but once again efforts had been

1 Engr. 24 February 1888

2 Ibid. 30 March 1888

3 Ibid. 4 May 1888

4 Ibid. 10 August 1888

5 Ibid. 17 August 1888 ("C. of Westminster")

6 Ibid. 7 September 1888

7 Ibid. 27 July 1888

8 N.C. November 1888

9 Q.R. Technical Education and Foreign Competition. CLXVII July - October 1888

10 Hd. CCCXXVIII (1888) 68

11 Ibid. 1667

12 Engr. 6 April 1888

unsuccessful. Another Bill sponsored by Roscoe in February 1889¹ disappeared. The third government attempt was presented as a "Technical Instruction Bill". "Some of the acutest (sic) and most intelligent men at South Kensington and Whitehall" were "puzzling their brains to find a solution" on the position of the voluntary schools, which "caused particular comment on its presentation,"² said Hart Dyke later.³ "The bill is going on despite sly digs in the ribs from Pat Cumin" (Secretary of the Education Department) Donnelly told Huxley.⁴ "Technical instruction" was negatively defined as "not including trade or practice": The Engineer charged that "the propagandists hope to get it through first, and will then decide what to teach ... it will provide employment for the products of the Department at the expense of the rates".⁵ This attempt, too, proved unsuccessful, as did a number of private members' Bills.⁶

iv) Eventual success : the Act of 1889

The government Bill which eventually attained success was introduced by Hart Dyke in July 1889.⁷ The "local authority" would be the County, or County Borough Council, and not the School Board, and it would have "the power to raise a rate to aid technical instruction", but there would no power to aid elementary schools.⁸ (An amendment to give local authorities power to aid the School Boards was not accepted.)⁹ Fears of the Department were again expressed in the debates: one member quoted The Times as "fearing the growth of an unpleasant rivalry" between the two Departments,¹⁰ and there were proposals to give "decision and control" to the Education Department.¹¹ In fact, the Department was given these powers of sanctioning schemes, deciding disputes between Schools and authorities, and was stated to be "the central authority on the distribution of government grants". Although a member reminded the House that, as it stood, it "diminished the authority of the School Boards",¹² the Act was passed in August.¹³

The Department's responsibility was defended by Roscoe at the City and Guilds College later in the year.¹⁴ It was right that the Department should

1 Hd. CCCXXXIII (1889) 129
 2 Hd. CCCXXXVI (1889) 637 (Whitley)
 3 Hd. CCCXXXVIII (1889) 489
 4 MS Letter Donnelly to Huxley 16 February 1889
 5 Engr. 2 August 1889
 6 Hd. CCCXXXV (1889) 1480 and CCCXXXVIII (1889) 1374, CCCXXXIII (1889) 1102, 1232
 7 Hd. CCCXXXVIII (1889) 1232
 8 Hd. CCCXXXIX (1889) 991
 9 Ibid. 555 and 689
 10 Hd. CCCXL (1889) 686 (Channing)
 11 Ibid. 532 (Channing) 707 (Stewart)
 12 Ibid. 805 (Picton)
 13 Ibid. 709 and 805 (52/53 Vict. C76)
 14 Nat. 26 December 1889

hold its powers, argued Hart Dyke. It would "thus afford authoritative instruction in a matter which would otherwise rest with the auditor and with the courts", and this could not be seen as "interference".¹ He repeated his view of the Department's powers in the following session.² That the Department did not intend to limit instruction to the "subjects" of its Directory is shown by the fact that it made available a sum of £5,000 yearly to assist the teaching of other subjects.³

In the event, very few local authorities used their rating powers under the Act. "Gratifying progress" was being made in 1890, said Hart Dyke.⁴ Mundella charged that only three local authorities that year were raising a rate,⁵ but Donnelly quoted the figure that year as 13.⁶ The Lord President, Carlingford, noted "as much progress as could be expected during the time".⁷

v) The "Whisky Money": the Act of 1890

A much more valuable source of funds came with the passing of the Local Taxation (Customs and Excise Duties) Act in that year. The Bill was originally intended to give compensation to interests affected by a new system of licensing laws. It was transformed by Acland, who sponsored a successful amendment which said that the funds should be used instead "to aid agriculture, commercial and technical education".⁸ (The debate was notable in another connection: David Lloyd George made his maiden speech in the matter of Welsh interests.⁹) £300,000 of the funds would be applied to police superannuation: the rest could be used by local authorities for aid to Technical Education, or for general relief of the rates.¹⁰ It should perhaps be stressed that the Act handed on the powers to the Department which it had been given under the little used Act of 1889. The much more important Act of 1890 eventually provided the means to stimulate Secondary and Technical education to a degree which the Department, alone, had never been able to attain.

The Act had "rendered the passing of a special rate unnecessary", Donnelly noted in 1892, when only seven areas raised special rates. It had "given an extraordinary impetus to Technical Instruction", he thought.¹¹ The Department therefore suspended the special grant it had made available for aid

1 Hd. CCCXLI (1890) 748

2 Hd. CCLII (1891) 1156-1157

3 D.S.A. 38th Report 2

4 Hd. CCCXLVII (1890) 1362

5 Ibid. 577

6 D.S.A. 37th Report xliii

7 P.M. 25.713 (22 April 1890)

8 Hd. CCCXLV (1890) 567

9 Ibid. 871

10 Hd. CCCXLVIII (1890) 463

11 D.S.A. 40th Report xlix

under the 1889 Act, except for Ireland,¹ where there was no "Whisky Money", as the funds available under the 1890 Act came to be known. While there was "no precise decision that the larger sum" would be available in 1891, when Hart Dyke made this recommendation to Carlingford,² Cranbrook, the next Lord President, promised that the new government had no intention of repealing the Act which made it available.³ The U.S. Commissioner of Education pointed out that the total annual expenditure of the Department was less than the amount at the disposal of the local authorities. (This was quoted as \$ 3,590,000, or approximately £700,000.⁴ The Department's total expenditure in that year was £473,102.⁵) "My thoughts are fully engaged in Technical Education, my word, it is agony ... even if booze money is taken away, the country has been regularly shaken awake ... the wanters of money, who are many, and the dispensers of money, who are numerous, are sharpening one another up", Donnelly told Huxley.⁶ "Beer money enthusiasm" was a proof that the Department's work had not been unfruitful, he said in 1895.⁷ "County Council funds" had helped "to encourage higher scientific teaching to a greater extent than ever before", Donnelly said later.⁸ Some money had "been wasted", but it had "gone well on the whole", and "it would be bad for us, and for them, to attempt to control them in any way".⁸ He was speaking sincerely.

vi) A partnership in Technical Education

Fears of an extension of the Department's powers were not immediately stilled when the 1889 Act was passed. Nature believed that to limit "Technical Instruction" to the Department's subjects would be "nothing less than a disaster",⁹ and was afraid of "central bureaucracy".¹⁰ "Municipalities are under the foot of the Department", charged the Town Clerk of Leeds.¹¹ The interpretation placed by the Department on "technical instruction" was generally agreed to be a liberal one, however. Roscoe's assurance to the British Association that the Department was "anxious to give free choice and scope"¹² was welcomed by Nature.¹³ The Department had maintained "utmost courtesy" in

1 D.S.A. 39th Report liii

2 P.M. 25.1,074 (9 February 1891)

3 Hd. I (1892) 430

4 Report 1890-1891 (Washington, Government Printing Office) I 113

5 D.S.A. 38th Report lv

6 MS letter Donnelly to Huxley 8 January 1891 (Catalogued as 1881)

7 Nat. 29 November 1894 (Speech at the Society of Arts)

8 R.C.S.E. AA. 1073 and 1229

9 Nat. 5 December 1889

10 Ibid. 22 October 1891

11 Engr. 17 October 1890

12 Br. Assn. 1890 Report

13 Nat. 25 September 1890

reply to queries, and had shown "wide discretion in giving a free interpretation," believed Earl Cowper.¹ The Department's "recognition of subjects not in the Directory" was approved by Engineering.² The Secondary Education Commission, in one of its few praises of the Department, said that it was "liberal in its interpretation ... and kept the needs of the localities in mind".³ In 1899, the Department was praised by Nature for its "willingness to meet the wishes of local authorities in administrative details".⁴

The 1889 Act "should have said technological, not technical ... as some of the authorities are carrying instruction into trade itself", Donnelly believed six years after its passing,⁵ but "so long as the question is looked at of teaching the principles of how to develop manipulative skill, rapidity, and dexterity, rather than one of supervision of actual practice ... there is no difficulty in working the Act", he told an International Congress in 1897.⁶ When certain subjects were sanctioned, namely sheep-shearing, thatching and hedge-cutting, instruction was "limited to showing the best methods, and instruction beyond principles might be involved, but practice to give manual dexterity is contrary to the Act". A list of subjects not sanctioned included History, Swimming, Latin, Elocution and Archaeology.⁷ Subjects which were approved included Arithmetic, Bleaching, Brewing, Cookery, Cotton Spinning, Porcelain Design, Hosiery, Lace, Modern Languages, "Soap", Telegraphy, Shorthand and Typewriting,⁸ Market Gardening, Ploughing, Elastic Web Manufacture, Gilding, Insurance and Poultry.⁹ By 1898, a total of 128 "other subjects" had been approved.¹⁰

The Department held local enquiries in cases where there were disputes between local authorities and "the wanters of money". Opinions and decisions were listed in Annual Reports, and included the statements that there could be no aid where there was any involvement for private profit, and that funds could be used for the erection of Schools even where the education therein would not be exclusively "technical or scientific education".¹¹

1 Hd. I (1890) 420

2 Engg. 15 August 1890

3 R.C.S.E. 28

4 Nat. 8 June 1899

5 R.C.S.E. A.1235

6 Nat. 24 June 1897

7 D.S.A. 40th Report li - lii

8 D.S.A. 38th Report lii

9 D.S.A. 40th Report l

10 G.Balfour The Educational Systems of Great Britain and Ireland (Oxford University Press 1898) 181

11 D.S.A. 40th Report liii

There was a complaint in the first years that local authorities were in fact making false claims, and were really using the "Whisky Money" in relief of the general rates, which they were of course entitled to do, if they wished.¹ Such reluctance had almost gone by the end of the century. In England alone the Whisky Money was contributing £746,000 and rate aid £179,000, in 1895-96.² In 1896-97 the figures were £808,000 and £142,000 respectively: 38 out of 54 Councils were applying all the Whisky Money to education, and only one Council was making no application at all.³ The Department's action in placing the responsibility for the encouragement of the less advanced work on the newly prosperous Councils has been recorded.⁴ Two further consequences of this prosperity were the disappearance of Schools which had no other source of income save fees and Department grants⁵, and increasing problems in the field of day-time secondary education of older children.⁶

vii) Demands for "central direction"

While the Department may from 1889 have been charged with the responsibility for deciding whether schemes for technical instruction were valid, and while it continued to possess the right to regulate the administration of its "own" grants, these were the limits of its powers over the local authorities. There was no pretence that it was a directing body, and such a claim would have been resented and feared. While an outspoken critic of previous years could suggest that the time had come to put it in charge of all Technical Education, "not a multiplicity of County Councils, the Education Department, the City and Guilds and the Charity Commissioners"⁷, and Roscoe believed that it could well take over the City and Guilds,⁸ these views were by no means representative. The result was that central direction was lacking. The Secondary Education Commission saw the Department as "performing the function of a Central Authority so far as it exists", but believed that "it would be more statesmanlike to help inexperienced local authorities by firm advice from the centre", and used this as an argument for unification of the two Departments.⁹ "Much waste of Whisky Money because there is no guiding spirit"¹⁰ at headquarters, no central department to make suggestions to County Councils", was admitted by

1 Hd. CCCLVI (1891) 411 (J.Rowntree)

2 D.S.A. 45th Report lx

3 D.S.A. 46th Report lxvii-lxviii

4 Section c (iii)

5 Chapter VI (j) and Chapter VIII (b)

6 Section d (iii)

7 Engg. 8 September 1893 (G.Halliday)

8 Nat. 26 December 1889

9 R.C.S.E. 28, 100, 103

10 This was hardly the most appropriate choice of phrase in this connection.

Hart Dyke.¹ He claimed, however, that "the Science and Art Blue Book" (the Report) showed that local authorities were "competent in their administration".² The need for "central direction" was not met in the life-time of the Department: it did, however, endeavour to provide more guidance in its very last year by offering to provide local authorities with extracts from its Inspectors' Reports, as will be detailed.³

viii) A further hand-over of powers

One consequence of Acland's accession to office was a statement in the Directory of 1893 that the Department "expected a period when the system would become less centralised".⁴ The handing over of responsibility for less advanced work in 1891 could be seen as one step in this direction. The special Committee on grants to Science and Art Schools,⁵ of which Donnelly was a member, suggested in 1897 that there was a need for a further clause in the Directory which would give a local authority power to take over all responsibility for classes in its area. There was great willingness to accept this responsibility.⁶ Such a clause, "Clause VII", was added to the Directory for 1898, and the Councils' Technical Instruction Committees began to be formed. While it referred to "secondary education",⁷ the Department also defined the area of responsibility, as "Technical instruction as defined by the 1889 Act".⁸ There was "no dark conspiracy to interfere with higher education", Gorst, the Vice President, said. "It was the pleasure of Parliament to allow the Department to proceed without statutory authority on the formation of Technical Instruction Committees ... the entry of School Boards to such Committees would be voluntary", he added.⁹

The right of the Department to "create" local authorities was queried in and out of Parliament. The matter was raised in the debate on the estimates in 1899,¹⁰ and a peer asked why the Department had "accentuated the worst effects of dual administration on the eve of its dissolution".¹¹ One writer claimed that Gorst had "tried by Science and Art Minute to constitute an unconstitutional body".¹² It was believed that "Clause VII" was a device

1 R.C.S.E. AA. 11822-11893

2 Hd. XXXIX (1896) 526-539 and 769

3 Chapter X section (d)(iii)

4 D.S.A. 40th Report lviii

5 P.P. (1897) XXIII (421) and D.S.A. 44th Report 5

6 P.P. (1898) XXXII (439) Appendix

7 D.S.A. Directory (1895) 4

8 D.S.A. 45th Report 6

9 Hd. LXIV (1898) 360-364

10 Hd. LXXV (1899) 1497-1500 (Yoxall)

11 Hd. LXX (1899) 321 (Reay)

12 T.J. Macnamara N.C. April 1899 (Macnamara was a leading member of the N.U.T.) and a member of the London School Board.)

to forestall the creation of unified Local Education Authorities. This had to be denied by a member of Parliament¹, and by the Lord President, Devonshire.² It was quoted by the London School Board, when its dispute with the London County Council over its representation on the former body's Technical Instruction Committee, which it believed to be much too low, was the subject of an enquiry held at South Kensington in February 1899. In the event, "My Lords" recognised the L.C.C. as the "responsible body" under Clause VII.³ Under-representation of School Boards on Technical Instruction Committees was also a matter of concern, as was revealed by questions in the House,⁴ and by four petitions from School Boards⁵ in 1898. By March 1899 24 Counties, and 9 County Boroughs, had accepted responsibility for organisation.⁶ An attempt to give greater responsibility to local bodies, and to rid the Department of the frequently levelled charge of over-centralisation, had met with practical success, but had increased its unpopularity with the School Boards and their supporters.

e) Relations with the School Boards

i) The legal position

The increased demand for "technical instruction", which the Department was prepared to meet, so long as the classes it aided studied "principles" rather than "practice", could be met in evening classes, or in day classes. The School Boards set up under the 1870 Education Act were in general most ready to work with the Department in both these areas: their powers were in theory, however, restricted to the provision of aid to "elementary education", but ~~this field~~ was nowhere closely defined. The persistent refusal of the Education Department to allow the Department to aid classes of schools on "its" registers, other than in elementary Drawing and later, in Manual Instruction, had, as has been seen, led to the "evening" instruction of increasing numbers of school children. This had led the Department in its turn to impose a restriction on the ages of children who could be presented for its examinations: although somewhat complicated in phraseology, it meant, in effect, that only children who had "proceeded beyond Standard VI" could earn its grants.⁷

1 Nat. 9 February 1899 (Jebb)

2 Ibid. 23 March 1899

3 P.P. (1899) LXXV (1021)

4 Hd. LV (1898) 734 (Toxall)

5 Hd. LXII (1898) 821, 1297 and LXIII (1898) 423, 574

6 Nat. 23 March 1899

7 Chapter IV Section (h) (ii)

One alternative for voluntary schools and School Boards who wished to earn the Department's grants on full-time schools was to adopt the legal fiction that children in higher classes were "not on the registers of the Education Department". There therefore developed "ex-VII classes" in the same premises as classes of younger children. The other alternative was to set up "higher grade"¹ schools in separate buildings. They were sometimes known as "Organised Science Schools", and were almost always carried on under the Department's special regulations of 1871² which gave additional payments for "grouped" and extended courses, and which had been so slow to gain general acceptance. Their general development, and the details of their curricula, are recorded below.³

Even though the School Boards might have thus seemed to have circumvented the Education Department's ban, they had still not met the question of the restriction of their powers. A Circular issued by the Education Department in 1882 seemed to recommend the development of higher grade schools to Scots and Welsh School Boards.⁴ The Royal Commission on Technical Instruction hoped that power would be given to "local authorities" to support technical and secondary schools; it quoted with approval the efforts of Sheffield and Manchester School Boards in developing "higher elementary schools", and recommended that Boards "should be authorised to establish and conduct science and art classes for artisans", thus giving encouragement to an extension of their powers.⁵

ii) Growing complexity

Doubts as to whether the Boards could legally expend any of their rates on "ex-VII" classes, and a desire for government sanction of such outlay, were expressed by the British Association in 1886.⁶ The following year it reported a surcharge by the local government auditor on the Brighton School Board because it had "illegally" aided an Organised Science School, and said that there had been deputations from several School Boards to the Lord President to ask for the legal power to establish and maintain such Schools.⁷ "Many regard the higher grade schools as going beyond the elementary education contained in the Act", the Association reported in 1889.⁸ While there were those who wished the School

1 Henry Cole had used the term before the Scientific Instruction Commission. (R.C.S.I. A. 5955)

2 Chapter IV Section (e)

3 Chapter VI Section (i)

4 ~~Buxton~~: Notes on School Board Questions N.C. November 1883

5 R.C.T.I. 517, 518, 522, 537-538

6 Br. Assn. 1886 Report

7 Br. Assn. 1887 Report

8 Br. Assn. 1889 Report

Boards to be given powers to aid Technical Instruction, they were unsuccessful: as has been recorded, the powers were given instead to the County and County Borough Councils. The government's willingness to legalise the position with regard to "ex VII" scholars was also spurned, as has been noted. Several speakers in the debate on the eventually successful Technical Instruction Bill of 1889 referred to their difficulties. The "strictness of the auditors' interpretation of their application of the rates"¹, the "surreptitious nature of their work"², and "an excellent ex-VII school which had to curtail its activities because the Education Department told it that it was going beyond its powers"³, were all quoted. Despite these limitations, the School Boards continued to aid such classes. 126 Boards held classes under the Department and this represented 10% of all students, Hart Dyke admitted in 1889, and the British Association was told that just over 1½% of all elementary schools in the country, 134 in all, had such classes in that year.⁴

In 1890, the Department issued a Circular which more clearly defined the position: this said that no grant could be claimed on any pupils who were presented for any subject under the Education Code.⁵ This raised general objections from M.P.s on behalf of the School Boards,⁶ and Mundella referred to the "serious concern of the managers of higher elementary schools".⁷ The regulation was eventually withdrawn, but it was seen as "a feeler", although it was welcomed as an "attempt to check mere grant earning".⁸ While the higher grade schools, which particularly developed from 1890 with the assistance of the Whisky Money, were more often maintained by Councils than by School Boards, the latter did on occasion receive assistance from the Councils: the Manchester Council, for example, made a grant of £3,500 to the Manchester School Board for the development of its "Science and Art School" in 1891.⁹ The fears of the Boards over the powers given to the Councils under Clause VII have been recorded.¹⁰

1 Hd. CCCXL (1889) 514 (Picton)

2 Ibid. 521 (G.Dixon)

3 Ibid. 555 and 689 (Mather)

4 Br. Assn. 1889 Report and Hd. CCCXL (1889) 510

5 D.S.A. 38th Report lxx

6 Hd. CCCXLV (1890) 1135

7 Ibid. 1484-1485

8 S. and A. August 1890

9 D.S.A. 39th Report liii

10 Section d (viii)

iii) School Board "competition" and its consequences

The London School Board was particularly ambitious in the development of day classes. In 1896-97, there were over 7,000 students in its day Science Schools, and over 4,000 students in its day Art Schools.¹ "It was the opinion of the Department that the school fund could not be legally applied to such instruction, and it had said so in a letter to the School Board on 20 January 1888", Gorst told the House in 1899.² The limitation of the powers of the School Boards to "elementary education", which was not in any form to go beyond the age of 14, was resolved with the celebrated Cockerton Judgement, "when the Camden School of Art was driven to appeal to law" (the local Auditor) "because of School Board competition".³ How far Robert Morant and William Garnett, in their separate ways, were behind this move is still unresolved: it was hinted that "it was done on instructions from higher up"⁴, "because of certain objections to certain ideas".⁵ The unification under the Board of Education meant that confusion at the centre could finally be resolved. The maintenance of a School of Science by the Bristol School Board was definitely stated to be illegal, and there was a refusal to pay grants on London School Board pupils who were over-age.⁶

"Evening schools existed on one side of the street under Board and Education Department, and on the other side of the street under Science and Art Department and Council", claimed an anonymous writer in that year, and he quoted this "as a striking illustration of the need for the embodiment of clear and consecutive thought in legislation".⁷ This "ruinous system of competition" had been "properly discouraged by the Board of Education", Gorst told the House in 1901.⁸ The final solution had to wait until the School Boards and the Technical Instruction Committees were swept away by the Education Act of 1902, but the position was made much clearer by the decision which was in the process of being reached in the very final days of the Department's career.

1 P.P. (1899) LXXV (1021)

2 Hd. LXVI (1899) 1091

3 Hd. XCVI (1901) 1177 (Gorst)

4 Hd. LXXXII (1900) 617 (Hutton)

5 N.C. October 1900 (Extravagance and Economy in the London School Board)

6 Hd. LXXIV (1899) 25 (Gorst) LXXXVI (1900) 1057-1058 (Gorst)

7 Q.R. CXCI January - April 1901

8 Hd. XCVI (1901) 1177

f) The influence on Departmental policy of political chiefsi) Lords Spencer and Carlingford and A.J. Mundella (Second Gladstone Administration) (1880 - 1885)

Spencer served twice as Lord President, but there are few references to his influence on the Department. Carlingford was, however, "the best of chiefs" With Mundella he "held out like a man" when the Department was criticised for over-spending". (This was at a time when Donnelly was particularly bitter on "the sacrifice of my old friend Gordon" by "the wretched shifty rascals who call themselves the governors of the country".¹⁾

Donnelly disliked Mundella² intensely, and this would seem to have been based on an aversion which had little if anything to do with any desire on the part of the politician to hinder progress. Mundella had a long and honourable record of effort on behalf of popular education.³ He had in the past played a part in blocking the Museum transfer scheme,⁴ and had worked well with Cole on the School of Art and Museum in his Nottingham constituency.⁵ "Men like Mundella are dangers to any party that cares for economy", Lingen thought,⁶ so that it should not have been because his chief had any schemes for retrenchment that Donnelly disliked him. Cole's view of Mundella as "much cry and little wool" when he was disappointed in his hopes⁷ seems to have been shared by his ultimate successor. "Too conceited and windy", Donnelly believed, after only four months of official relationships.⁸ Mundella had admitted several years before that he "found Science and Art Minutes difficult to understand".⁹ In office, he "could not be bothered to read official papers".¹⁰ While Mundella believed Donnelly "excellent in his way",¹¹ there was later "much friction".¹² Donnelly "held Mundella in contempt", and told Cole that "he goes in the House by the name of Trickynosis".¹³

The Goffin case¹⁴ complicated relationships at this time, Donnelly believed that "Mundella thought that G. had answered".¹⁵ It is significant

1 MS letter Donnelly to Huxley 27 December 1884

2 Biographical Appendix

3 W.H.G. Armytage A.J. Mundella: The Liberal Background to the Labour Movement (London Benn 1951) 192-193 et seq.

4 MS letter Donnelly to Huxley 14 August 1873

5 Cole MS Diary 3 September 1868

6 MS letter Lingen to Playfair 17 February 1874

7 Cole MS Diary 28 January 1881

8 Ibid. 29 August 1880

9 S.C.S.I. A. 4668

10 Cole MS Diary 9 January 1881

11 Ibid. 20 January 1881

12 Ibid. 6 March 1881

13 Ibid. 8 March 1881

14 Chapter XI section (B)(h)

15 MS letter Donnelly to Huxley 8 March 1881

that it was Hamilton, out of office, who raised the question of Goffin's continued employment. When he did, Mundella agreed that it was "a scandal",¹ but the complicating facts of Goffin's employment by a school which came under the jurisdiction of the Charity Commissioners meant that no official pressure could be applied.

These things apart, Mundella was a public defender of the Department in and out of office. As Vice President he spoke of "its marvellous services", "wished all public money as well spent as at South Kensington", and quoted "its beneficial effects upon industry".² Later, he welcomed a supplementary vote as "proof of success", and said that he knew "of no Department where every farthing is so closely looked after".³ He defended the Department against Bartley,⁴ and made a number of attempts to secure improved accommodation for the Museum.⁵ He could speak of "my" South Kensington when he told Playfair that "we in England are advancing by leaps and bounds on Technical Education".⁶ On one occasion, when subjected to an attack in the House on the grounds that his portrait bust was displayed in the Museum, he said that it had been "long removed", and went on to say that he had never recommended a vote, on the improved building programme and the purchase of land, with more conviction.⁷ Donnelly's dislike of Mundella could have been based on his chief's apparent conceit: Cole was told by an official of the Education Department that "Mundella had boasted of doing great things and reforming the Office",⁸ and Roscoe recorded the remark made at South Kensington "Here come Lord Mundella and Mr. Spencer".⁹ At any rate, relations between politician and official must have improved, since it was during Mundella's tenure of office that Donnelly was chosen as successor to Macleod. It was later suggested that Mundella was behind the transfer of responsibility for Drawing to the Education Department in 1886.¹⁰ This cannot have caused any friction, since it was Donnelly's belief that this should be done.

1 Hd. CCLXIV (1881) 1298-1299

2 Hd. CCLX (1881) 540-541, CCLXII (1881) 207 and CCLXXXIII (1883) 396-398

3 Hd. CCXI (1887) 1430-1433

4 Hd. CCCXXX (1888) 1430

5 Chapter IX section (e)(v)

6 MS letter Mundella to Playfair 17 December 1889

7 Hd. CCCXLI (1890) 1195 and 1204

8 Cole MS Diary 9 April 1881

9 H.E. Roscoe Life and Experiences (London Macmillan 1906) 288

10 N.A.A.A. 1891 Report 153 (T.R.Ablett)

ii) Marquis of Cranbrooke, E. Stanhope and Sir Henry Holland.

(First Salisbury Administration) (1885 - 1886)

Stanhope served for only two months before he left to become President of the Board of Trade, but he is notable as being the first Vice President to have a seat in the Cabinet from his appointment.¹ Holland vigorously defended the building programme², but otherwise the only item of note is that Donnelly ~~thought~~ "Damn this change of Vice Presidents! What a bore".³

iii) Earl Spencer and Lyon Playfair (Third Gladstone Administration) (1886)

Playfair first told Cole of his political ambitions in 1867, when he was "prepared to resign his Chair and go into Parliament if he could do so without expense", and "was prepared to sacrifice £1,000 a year to get into Parliament".⁴ He regretted "having to give up Museum Reform" when he first gained office, as Postmaster General, in 1873.⁵ (Cole and Chadwick had been "much amused" at the announcement.⁶) While he had proposed the appointment of a Minister of Education when out of office, and was a member of the Committee on Administration, as has been noted, his brief tenure of office, with Spencer, seems to have had little effect on Departmental policy, although it must be repeated that the Committee believed that "the existing arrangements" for the Department "should not be disturbed".

iv) Marquis of Cranbrooke, Sir Henry Holland, W. Hart Dyke (Second Salisbury Administration) (1886 - 1892)

Holland, at the outset of his second term of office, told Playfair that he would do his best to make "a worthy successor"⁷, but his influence would appear to have been slight. The part played by Hart Dyke⁸ in the promotion of Technical Education Bills and his sponsoring of the Department as a referee, has been recorded, and he defended the Department strongly in the debates on the estimates in 1887 and 1889.⁹ It was during this administration that approval was given for a very great building scheme, but it was not carried through. Out of office, Dyke favoured the fusion of the two Departments.¹⁰

1 D.N.B.

2 Hd. CCLXII (1881) 157

3 MS letter Donnelly to Huxley 17 August 1885

4 Cole MS Diary 8 May and 1 October 1867

5 MS letter Playfair to Cole 16 November 1873

6 Cole MS Diary 14 November 1873

7 MS letter Holland to Playfair 1 August 1886

8 Biographical Appendix

9 Hd. CCCIX (1887) 1556-1559 and CCCXXXIX (1889) 1386, 1390-1392

10 R.C.S.E. AA. 11822 - 11924

v) Lords Kimberley and Rosebery and A.H.D. Acland (Fourth Gladstone and First Rosebery Administration) (1892-1895)

Acland¹ had served as joint Secretary, with Roscoe, of the National Association for the Promotion of Technical Education,² while he had sponsored an unsuccessful Bill which gave the Department power to decide the validity of local authorities' Technical Education schemes.³ As an editor, he had been jointly responsible for such statements on the Department's activities as "the very worst way in which a secondary school can receive public aid is by payments on results of examination ... examination must give way to inspection ... (there is) a growing demand that the Science and Art Department shall entirely change the method on which their grants to day schools are given". The "machinery for testing work ... is far from perfect ... local bodies must take over much of its work".⁴ His part in the diversion of the "Whisky Money"⁵ has been recorded, as ~~must~~ be his desire in 1888 for the fusion of the two Departments.⁶ He could thus be expected to initiate new measures.

Within a few months of Acland's appointment, Donnelly's worst fears must have been realised. Acland appears to have used his influence in the award of Donnelly's knighthood, but this did not please the old soldier, who saw himself as being "tied hand and foot ... now I cannot fling out at him". He "would sooner be without honours", because his chief had "no idea of the way Government Departments work ... he is his own Chief of Staff, fiddles with the merest details, giving endless trouble as everything gets adrift ... plenty of people hate me ... only adds fuel".⁷ Four months later Acland was "deuced difficult to get on with ... it is all playing to the gallery and preconceptions".⁸ By December, "My master is giving me a good deal of trouble and worry ... he started with the idea that everything the Department had done or could do was wrong ... pretended to come round (but) has returned with gusto to his old vomit and acts accordingly".⁹ (The phrase in the 1893 Report which talked of "looking forward to the day when there was less centralisation" is probably referred to here.)

1 Biographical Appendix

2 Armytage A Social History of Engineering 240-241

3 Hd. CCCXXXV (1889) 1480

4 ed. Acland and Llewellyn Smith Studies in Secondary Education (London Percival 1892) 303 and 309

5 Section d (v)

6 Hd. CCCXXX (1888) 1396-1405

7 MS letter Donnelly to Huxley 1 June 1893 (signed simply K.C.B.!)

8 MS letter Donnelly to Huxley 28 October 1893

9 MS letter Donnelly to Huxley 6 December 1893

Donnelly was particularly hurt when Acland ignored him and toured the country with Abney, appointing the new inspectors who were to play such an important part in the eventual abolition of payment on results. "Never consulted or asked in any way to be present ... a little difficult to get on with a chap of that kind and keep an office going straight", he complained.¹ "Quite driven out of my head by our dreadful Vice President² ... he wants everything to go to him ... he altered the wording in the Calendar to show he had done it". Because Acland, after delaying the Calendar a week, sent it back with instructions that the Press should get it on the same day as Members, Donnelly added "quite wrong, but may lead to favourable notices of the great Vice President ... the amount of vanity is quite a new revelation".³ Donnelly preferred "not to discuss an appointment ... as Acland has a mania about them".⁴ Relations improved to the point where Donnelly was "getting on with Acland ... his little game was to make it appear that I was an unreforming bloke and he was the new gospel ... letting him have his head ... he (sees) he needs my assistance." He still believed, however, that he was "an intriguing scamp". He ended by hoping that "Providence in the shape of the ballot box will remove the thorn".⁵ Acland, in his turn, confided ~~to~~ his Diaries that "At South Kensington I have to fight Donnelly a great deal".⁶

The providential ballot box turned up and Acland left office: he was not a fit man, and gave up public office soon afterwards, but not before he could defend the Museum as a Mecca for "the very princes of Artists and designers", and to say that he knew that it was "the policy of the Treasury to hit South Kensington whenever they have the chance".⁷ Acland's period of office was important: his only real achievement when in Office was to obtain the appointment of the additional staff who would eventually make it possible to replace written examination by inspection, but he paved the way for the reforms which followed.

vi) Duke of Devonshire and Sir John Gorst (Third Salisbury Administration)
(1895 - 1902)

The absence of primary sources limits references to more personal relationships between Donnelly and his new chiefs. Gorst⁸ was as much concerned

1 MS letter Donnelly to Huxley 6 December 1893
 2 MS letter Donnelly to Huxley 25 December 1893
 3 MS letter Donnelly to Huxley 5 January 1894
 4 MS letter Donnelly to Huxley 23 March 1894
 5 MS letter Donnelly to Huxley 24 September 1894
 6 W.H.G. Armytage Four Hundred Years of English Education (Cambridge University Press 1964) 177
 7 Hd. XLII (1896) 1294-5
 8 Biographical Appendix.

with the reform of the Department as had been his predecessors, and references have been made above to his views on administration, on the relationships with local authorities, and on the organisation of Secondary Education. It is notable that both he and Devonshire defended Donnelly against the charges of the Museums Committee, and their tributes on his retirement, particularly Gorst's reference to "a warm personal friendship", have been noted. It was Gorst who superintended the eventual amalgamation of the two Departments, and chose Morant for the personal control of the arrangements. At the time of the dispute between the London School Board and the L.C.C. over the interpretation of Clause VII, he told Garnett "It is impossible for the Department to carry out its duties if it does not know the meaning of the Acts it is supposed to administer"¹. Great credit is due to Gorst, who later left the Conservative Party and, unsuccessfully, sought election as a Liberal, for his work in preparing the way for the Education Act of 1902 which, together with the administrative re-arrangements which followed the Board of Education Act of 1899, simplified a situation whose complexity is at times almost defiant of clarification.

g) Charges of maladministration

i) General charges

The proportion of the Department's expenditure which was spent on the administration of its system was questioned several times in the Commons during the period of Donnelly's tenure of office.² There were also charges of "a revival of the patronage system" when two temporary assistants were retained while two permanent officers were transferred as redundant³, and a promotion was queried.⁴ A body calling itself the "Society of Science, Letters and Art of London", with Headquarters at Kensington, which awarded certificates and medals, was officially disclaimed in 1894.⁵ The Department's Reports were criticised as "hopeful accounts ... a considerable proportion of which need never have been put into type"⁶, "waste ... in printing a stupendous mass of details"⁷, "full of details of the Art mill ... kept going at the cost of the nation"⁸, and "over-detailed".⁹

1 B.M.Allen William Garnett: A Memoir (Cambridge Heffer 1933) 87
 2 Hd. CCCIX (1887) 1536-1560, CCCXXXIX (1889) 1390 XXXVI (1895) 1046
 3 Hd. CCCLV (1891) 1585
 4 Hd. XVII (1893) 1596-1597
 5 Hd. XXVII (1894) 550-551
 6 Ath. 31 August 1895
 7 Ibid. 7 September 1895
 8 Ibid. 26 February 1898
 9 Ibid. 27 May 1899

ii) The chief critics

The whole administration of the Department was assailed at the hearings of the Select Committee on the Museums of the Science and Art Departments, which did not limit itself solely to the area of the Museums. Questions on the Art Library and on the preparation of a catalogue of engraved portraits were raised in the Commons in April and July 1896 by Lord Balcarres.¹ In the debate on the estimates in that year, John Burns said that where the Department was "not a nest of nepotism" it was "a jungle of jobbery ... with more goats browsing on the heights of well rewarded incompetency and inefficiency than in any other Department". He promised that if he were appointed Chairman of a Select Committee, he would "rid it of dead head officials" and reduce expenditure considerably.² Gorst, the Vice President, agreed that a Committee would be a good thing, possibly because he wished to clear the air, and he and Bartley became members, with Balcarres, Burns, Yoxall and Grey, who were all critics.³

At the same time, other opponents were at work. The editor of the Magazine of Art, M.H. Spielmann, carried out a series of attacks in the columns of his periodical. "The tyranny of the Department under General Donnelly, dictating its often foolish will ... the rapping military element ... a drum head court martial maintained under martial law", were phrases used in "The Case of South Kensington Museum", and he talked of a "relation of an official" being employed in the "compilation of a catalogue of engraved portraits".⁴ Donnelly was "autocratic", and the Department was "an annexe to Chelsea Hospital" (Donnelly, Abney and Festing, all R.E. Officers, held high positions, and many of the attendants were old soldiers.) The atmosphere was "impregnated with and affected by military jealousy, suspicion and mistrust".⁵ Staff were moved around so much that no-one ever got the chance to become expert in any field.⁶

A third party was Sir John Robinson, whose hatred of the Department stemmed back to the days of his stormy relationships with Cole, which had led to his retirement on pension in 1868.⁷ He had carried on a series of attacks on the Department in general, and on the Museum in particular, since that time.⁸

1 Hd. XXXIX (1896) 1507, XL (1896) 202, XLII (1896) 70 and 1112

2 Hd. XLII (1896) 1298

3 Hd. XLII (1896) 1301-1302 and XLVI (1897) 1308

4 M. of A. August 1896 (419-420)

5 Ibid. September 1896 (446-448)

6 Ibid. October 1896

7 Chapter IX section (c)(ii)

8 N.C. June 1850, December 1892 and Biographical Appendix.

He also believed that Donnelly had made a "malicious attack" on him in 1883 over the purchase of some armour for the Museum. (How far Robinson inspired Balcarres is conjecture: both moved in the same "Art" circles.) Both Donnelly and Robinson wrote to Playfair at this time. Donnelly said that since "the Robinson question comes up so constantly you ought to know the position. His appointment was abolished in 1867 because he would deal in his own account ... Under present circumstances it is well you should be posted up in the matter." He believed that he had been mistaken in 1883 in not pressing that the "armour" case should be made publicly known, "but I did not want to ruin the man, and poor Owen in a foolish way was sadly mixed up in it ... the consequences have been that I have been persecuted by the fellow ever since."¹ Robinson told Playfair that "the South Kensington chaos must be brought into order", and said that there would be little hope of government assistance unless this were done.²

iii) Charges of nepotism

The Enquiry opened in March 1897, and Donnelly was examined for six and a half days in all during the first sittings. He was particularly goaded by Burns, and after six days of the inquisition retorted by asking him to quote one real case of malpractice.³ The charges included allegations of Museum purchases of forgeries, strictures on the circulation system, and accusations of widespread nepotism, but the chief charge against Donnelly was that he was the "un-named official" who had secured a sinecure for his cousin, Julian Marshall, who had been employed as a cataloguer of a collection of engraved portraits.⁴ Marshall had been previously employed as an auction agent,⁵ and cataloguer.⁶ Weale, the Keeper of the Art Library, implied that Marshall had been given this assignment as a result of Donnelly's direct intervention.⁷ The catalogue eventually produced, it was asserted, was full of elementary blunders and was unbalanced in its biographical detail. (Jackson, pugilist friend of Byron, rated eleven lines: Disraeli had three.)⁸ Marshall defended himself by saying that he took his information from standard reference works,

1 MS letter Donnelly to Playfair 20 November 1897

2 MS letter Robinson to Playfair n.d. (1897?)

3 S.C.M. (1897) AA. 627-2092

4 Ibid. Appendix XXXVI 574 (Memorandum by Spielmann)

5 P.M. C 2 Mus. 17 (1867)

6 Ibid. C 2 Mus. 226 (1869)

7 S.C.M. (1897) A. 6847

8 Ibid. xxii

and that he was in his view right in devoting more space to the less famous, since references to others could more easily be found.¹ Donnelly claimed that he had informed successive political chiefs of the relationship, and that Weale had requested the appointment.²

Donnelly also had to produce information which showed that of a total staff of 784 in the Museums and offices, 284 were related to one another in some degree.³ It was natural, he believed, that posts at attendant level should be filled on personal recommendation and knowledge of trustworthiness: higher posts were filled by open examination or by direct approval of the Lord President.⁴ At this time only Alan Cole and Fowke of the Senior officers were related, and it was Donnelly's bad fortune that his period of administration should see these charges publicly made, when in Cole's time the placing by family connection had been much greater. (It will be later recorded that Donnelly could have recommended Fowke, whom he preferred as a friend, for succession to the post of Assistant Director, but he supported Abney, as the better qualified.) "Poor records no doubt contributed to charges of nepotism", believed the Committee, and they made no other observations.⁵ (Spielmann had charged that records had been intentionally destroyed.)⁶

iv) Charges of militarism and malpractice

Spencer, the former Lord President, told the Committee that he "would not eliminate military men ... as their training ensured that they were highly educated and was a guarantee of their good character".⁷ The Committee made no observations on this matter, except to note that the "head officers of Kensington, Dublin and Edinburgh are drawn from the service"⁸ (This was despite Spielmann's renewed hope that "military control will be dispersed".⁹)

Weale's evidence on the Marshall case, and his statement that advertisements which were removed from periodicals before they were bound were subsequently bound themselves, was regarded as particularly damning.¹⁰

(Joseph Bailey, Donnelly's secretary, was later questioned on his reasons for

1 S.C.M. (1897) Appendix XXXV 572

2 Statement by Donnelly 13 December 1898 [P.P. (1899) LXXVI]

3 S.C.M. (1897) Appendix XVI

4 Ibid. AA. 23-33

5 S.C.M. (1898) xxxvii

6 M. of A. 1897 79-81

7 S.C.M. (1897) AA. 5059-5065

8 S.C.M. (1898) xxxi

9 M. of A. 1897 79-81

10 S.C.M. (1897) A. 6925

approaching the shorthand writer for a copy of Weale's evidence: he said that he had acted on his own initiative "to get the facts right", but the clerk claimed that Bailey had said that he was acting on Donnelly's authority.¹⁾ Weale had been due to retire, but his appointment had been continued "until the termination of the Committee or the publication of the Report". His appointment was terminated on 6 August 1897, the day after the House rose. The matter was raised in the House,² was called "a summary dismissal",³ and was compared to "the treatment of a subordinate who criticised his C.O."⁴ Donnelly refused to produce the Departmental notes on Weale's appointment, and said "If such an action were allowed, the public service would go to pieces within 48 hours".⁵ The Committee voted for censure by four votes to two, Bartley and Gorst being absent, called the action "a breach of privilege", and took the occasion to add "the Department has for years been the nest of sordid personal controversies ... and ... honeycombed with nepotism".⁶

Robinson was given the opportunity to make a public recital of his grievances. He claimed all the credit for the foundation of the Museum, said that "decadence and confusion" had followed his enforced retirement, which had been entirely due to Cole's enmity and jealousy, and referred to Donnelly's "malicious attack" on the armour purchases.⁷ Donnelly's defence was that he had informed Spencer, then Lord President, that he had been told that Robinson was in fact the owner of the armour which he had recommended the Department to purchase from another person, and that Spencer and Sandford had supported his action. He had, he said, only just recommended purchases from Robinson.⁸

The Committee found that Donnelly had "a personal animus" against Robinson, and talked of "acute controversy and injury to the public service". It recommended, inter alia, "the paramount importance of the appointment of a Minister of Cabinet rank with responsibility for Museums", a weekly visit to the Museum by one of the political chiefs, and that "the Secretary of the Department should have his office at Whitehall".⁹

1 S.C.M. AA. 7450-7452
 2 Hd. LXIV (1897) 654 (Ascroft)
 3 M. of A. 1897 341
 4 Art J. 1898 316
 5 S.C.M. (1898) A. 368
 6 Ibid. lxii - lxiii
 7 S.C.M. (1897) AA. 7506 - 8010
 8 Ibid. AA. 8061 - 8108
 9 S.C.M. (1898) i - lxxx

The Magazine of Art believed, after the publication of the 1897 Report, that its charges had been justified, but was prepared to admit that the Department was doing "considerable work" and would be happy if the "Secretary were shorn of the power acquired contrary to the original plan".¹ The Art Journal said that the 1898 Report "justified all the bitter criticism and disparaging comment" which had been increasing for years.² Engineering talked of "distrust of the South Kensington ring" as the "reason for the withholding of funds".³ The Athenaeum initially believed that the "personal element crops up freely and not too gracefully", but later felt that "various officers are manifestly unfit", yet referred again to "much unreasonable animus against the officers".⁴ After the publication of the 1898 Report, the Magazine of Art spoke of "the extraordinary degree of nepotism ... the autocratic will of the Secretary ... the South Kensington cabal", and demanded the dismissal of the "guilty officers".⁵

v) The consequences

In the event, Donnelly found his staunchest supporters in his political chiefs. They said that they were responsible to Parliament, that staff had loyally carried out their orders, and that charges of nepotism were totally unfounded. They had "every confidence" in Donnelly, they said.⁶ Devonshire went further in the Lords, saying that he had been personally responsible for the decision to terminate Weale's appointment. He regretted the "needless prejudice" of the Committee, and said that it had no right to suggest a scandal.⁷ Donnelly himself produced a very dignified document, which refused to deal with most of the charges on the grounds that they were inferences from inaccurate evidence. He ended by saying that he had "no knowledge for many years of any acute controversy", and he believed that relationships in the Department were "most harmonious".⁸ Nature lauded the political chiefs' defence, and said that it was an open secret that many of the members of the Committee were bitter opponents of the Department and its officers.⁹

1 M. of A. 1897 798-81

2 Art J. 1898 316

3 Engg. 19 August 1898

4 Ath. 30 October 1897, 20 August and 10 December 1898.

5 M. of A. 1897/1898 666

6 P.P. (1899) LXXVI "Observations on the Report of the Select Committee on the Museums of the Science and Art Department". (Statement signed by Devonshire and Gorst 3 February 1899).

7 Hd. LXVIII (1899) 934-938

8 P.P. (1899) LXXVI (Statement of 13 December 1898)

9 Nat. 9 March 1899

The reform of the Department was in any case planned before the Museum Committee sat, and it could be argued that with the knowledge that Donnelly, after forty years of faithful service, was due to retire, it might have been more ~~tactful~~ and more kind not to have raised the charges so publicly. The last months of the Department's separate existence were more peaceful. Nature believed that the 46th Annual Report showed "the vast extent of the Department's activities",¹ and that, to use a term not inappropriate in view of the military connection, was the object of the exercise. The 47th and Final Report, presented to Parliament² but not published, brought to an end the story of the Department as a separate body.

h) Relations with the Education Department, and the eventual merger

i) Demands for unification

When Sir John Lubbock³ moved for a "separate Department of Education" in June 1883, Playfair, in the position of Vice President which he held so briefly, said that the Lord President was "not a Minister of Education, but a Minister of Primary Schools ... and a few Schools under the Science and Art Department". As was recorded in the last chapter, a Select Committee on Administration (Education, Science and Art) was set up: Playfair and Lubbock were members.⁴ While the Committee strongly recommended the foundation of a Board of Education "under a President who would be the real as well as the nominal Minister", as has been noted, it believed that there was no need to alter the organisation of the Department.⁵ Cole's memorandum of 1867 on the subject was presented to the Committee by his son, Alan.⁶ "The suggestions of Commissions would not be pigeon-holed and barren", if such a Ministry were created, argued Huxley.⁷

While one contemporary critic argued that the evidence to the Committee showed that the administration of the separate branches, as they existed, was "disharmonious and unorganised", and that the result was to "cripple the action of the State in all other than Primary Education",⁸ little was done. Gladstone, the Premier, gave a delaying answer when asked what government action would follow the publication of the Report.⁹ The removal of responsibility for

1 Nat. 17 August 1899

2 Hd. LXXXIII (1900) 1227

3 Lubbock, Donnelly believed, should "devote his energies to helping us, not to Science in Elementary Schools, which will never come to much". (MS letter Donnelly to Huxley 13 October 1886)

4 Hd. CCLXXX (1883) 1933-1974

5 S.C.A. 1 [P.P. (1884) XIII (501)]

6 Ibid. Appendix II

7 Ibid. A. 1760

8 Henry Craik A Minister of Education F.R. N.S. XXXVII (January-June 1885) 476

9 Hd. CCXCIII (1884) 1116

primary education in Scotland to its Secretary of State complicated the issue.¹

The retirement of Sandford, as had been noted, ended even one nominal connection between the two Departments. "They really are two Departments now", believed one witness before the Technical Instruction Commission, and he saw great disadvantages in this.² The Department was "part of a fragment of disconnected machinery", Huxley believed.³ "The present administration is broken into two parts", argued Acland, when he anticipated, correctly, that the Department's full-time secondary education functions would increase, and he wanted the government to reconsider "the connection between the Department and Whitehall" finding a supporter in Bartley. The Departments were under the same political chiefs, it was stated in reply, and they were not "disconnected".⁴

ii) Complicating factors in administration

The question of closer association between the two Departments was made more difficult by the fact that while the primary Department was limited to England and Wales, the Department's area extended to Scotland, Ireland, "the colonies and dependencies".⁵ The Committee of the Privy Council was still in theory consulted on important steps to be taken by the Education Department,⁶ although a former Vice President believed that this was done on only extremely rare occasions.⁷ The Department was subject only to the control of the Lord President and Vice President.⁸ No parliamentary approval was necessary for the appointment of the Department's Inspectors, who were not "Her Majesty's Inspectors",⁹ and this was probably an intentional oversight of the early days, when the question of appointment, and functions, had caused great difficulties. While the yearly Education Code had to be presented to Parliament and, if necessary, debated,¹⁰ the Department's regulations needed no sanction by either House. When a Member wished the Directory to be so presented in 1894, Acland said that there was no obligation to do this, but that it would be done,¹¹ and from the next session the Report,¹² Syllabuses,¹³ and Directory¹⁴ were so presented,

1 Hd. CCXCIV (1885) 1610

2 R.C.T.I. A. 3648 (Oakley)

3 Letter to The Times 21 March 1887

4 Hd. CCCXXX (1888) 1396-1405

5 D.S.A. 35th Report 2 (Connections with colonial Schools had existed since the earliest days)

6 G.Balfour op. cit. 170

7 Hamilton op. cit. 152-154

8 "The Committee of Council never met with regard to the Department" as far as Donnelly knew. [S.C.M. (1897) A. 497]

9 Hd. LXXV (1899) 1106 (Gorst)

10 Hd. LIV (1898) 1673

11 Hd. XXIV (1894) 1530

12 Hd. XXXII (1895) 821

13 Hd. XXXV (1895) 32

14 Ibid. 252

but not the Minutes. As late as 1898, when two members demanded the presentation of the Minutes on the grounds that the Department could make any changes it pleased on the distribution of grants without a vote by the House, they were still not presented.¹ Even after the demise of the Department, Gorst could tell the House that "the Department's regulations were always on the table, but there was no obligation to do this".²

The absence of clearly defined functions in the "elementary" schools added to the confusion. Schools under the Education Department could qualify for grant given by the Science and Art Department for day instruction in Drawing. (For a very brief period the primary Department assumed this function.) Any other grants had to be earned "out of school hours" in the case of Modelling³ and Manual Instruction.⁴ Their children had to attend "evening classes" if they were to earn grants on other subjects, or be on separate registers if they were to earn grants on full-time instruction, a regulation which, because of lack of co-operation between the two Departments, led to the development of higher grade schools with a predominantly scientific curriculum. The responsibilities in the secondary field of a third party, the Charity Commissioners, complicated the issue even further.

iii) Complications in the field of secondary education

Reference has been made to the almost complete lack of co-operation between the Departments on the question of the teaching of science in the elementary schools. In the last two decades of the century the position became serious, with a growing demand for "secondary" education, which, as the position stood in 1870, could not legally be aided by the School Boards. The Department could aid such provision: it was, as has been seen, the "secondary" division, but "secondary" was seen by its sister Department as meaning "adult", and the original scheme of 1859 had included this proviso. In theory, the Department's aid was given to Schools set up by ad hoc Local Committees: endowed schools could, and did, receive its aid on these grounds. As has been seen, aid was also given to "higher grade schools" and "ex-VII classes" supported by the School Boards.⁵

1 Hd. XLII (1898) 1285-1287 (Hobhouse and Grey)

2 Hd. LXXXVI (1900) 575

3 Hd. CCCXXI (1887) 4

4 Hd. CCV (1886) 1665-1666 and 1833-1834 XVIII (1893) 1541

5 Section (e) (ii)

The Royal Commission on Elementary Education¹ believed that the State should recognise the division between elementary and secondary education, thought that the increase in the numbers of higher grade schools and "ex-VIII classes" was "injurious to both sectors", and strongly recommended that the higher grade school should be seen as "a continuation secondary school", with its direction completely in the hands of the Education Department.² An attempt by the Salisbury administration to legalise the position with regard to "aid beyond elementary" in 1887 failed, as has been recorded.³

The great spur to the development of "secondary day schools" was the Whisky Money. This, together with the rate which could be raised under the 1889 Act,⁴ which, said Donnelly, could be applied to one Central School if an authority so wished,⁵ was used by many Councils either to set up their own Schools, or to take over Schools from the Local Committees which had developed them under the Department's regulations of 1871. In 1891, the Schools (Science and Art) Act said that this might be done.⁶ Thirteen schools had been so transferred by the end of 1893,⁷ seventeen by 1894,⁸ and by 1898 the number had grown to 24.⁹

iv) The Royal Commission on Secondary Education and "unification".

In the year of the Commission's appointment, the House was told that it was possible to earn seven separate Education grants in Scotland,¹⁰ and "the sad want of co-operation" was again stressed.¹¹ Before the Commission, witnesses assailed the lack of co-ordination. The Senior Chief Inspector of the Education Department quoted cases where each Department gave grants unbeknown to each other, and said that "no care was taken ... that their curricula ... worked into one another".¹² The Secretary of the Association of School Boards talked of "divergent action", and pointed out that the primary Department had "practically abolished payment by results ... while the other accented it".¹³ The particular complaints on the system by which the Department encouraged its "Organised

1 Reports of the Commissioners appointed to enquire into the working of the Elementary Education Acts. [P.P. (1888) XXXV (Final Report)]

2 R.C.E.E. section 147

3 Section (d) (ii)

4 Section (d) (iv) and (v)

5 Nat. 5 December 1889

6 P.P. (1890-1891) LIX (137) Bill 425

7 D.S.A. 40th Report 1

8 D.S.A. 41st Report 5

9 D.S.A. 46th Report 5

10 Hd. XXXVI (1895) 1048 (Clark)

11 Ibid. 1046-1049 (Yoxall)

12 R.C.S.E. AA. 1471-1495 (Sharpe)

13 Ibid. A.9857 (C.H. Wyatt)

Science Schools" are recorded separately in the appropriate section,¹ but on the question of co-ordinated policy, politicians,² teachers' representatives,³ local officials,⁴ and government officials⁵ were unanimously in favour of a unified system of administration, with one exception.

This was Donnelly. He claimed "an intimate connection" with the primary Department, "did not see any necessity for amalgamation", argued that "systematic co-operation could be easily carried out", said that the Departments already "saw each others' papers" on matters of mutual interest, and contended "it is the merest separation of locality ... there is not the slightest difficulty".⁶ He admitted that the Department's work "had originally been intended to supplement the studies of a boy who left school at 13" but had extended into "wider spheres ... as time went on": he "favoured secondary education to 16 or 17", but "would have to write an essay ... on a system organised above Primary level".⁷ (The higher grade schools were elementary, not secondary, Kekewitch argued.)⁸

In their Report, the Commission noted that Donnelly was "alone in claiming that there was no necessity for amalgamation".⁹ The Departments, it believed, "were practically severed" and "independent in authority and action" although "they might consult".¹⁰ It referred to "witnesses' evidence of much overlapping", and said that the new powers of the local authorities under the Technical Instruction Acts strengthened the case for incorporation.¹¹ The connection "as it existed was only a personal one" through the political chiefs, and it believed that "there was a remarkable concensus of opinion on the need for a Minister of Education with a seat in the Cabinet".¹² It therefore recommended "a harmonising of agencies" and a greater unity of control, with the formation of a Central Authority to supervise Secondary Education,¹³ and the creation of a united Department, which would also take over the functions of the Charity Commissioners, to "unite the taxation which is the current educational income with accumulated wealth".¹⁴ While the services of the Department were

1 Chapter VI (Section (i))

2 R.C.S.E. AA. 6305-6330 (Samuelson) AA. 11825-11922 (Hart Dyke)

3 Ibid. AA. 8405-8406, 8640 (Bidgood and Forsyth of the Association of Head-Masters of Higher Grade and Organised Science Schools)

4 Ibid. A.14872 (Dixon and Brigg of the West Riding County Council)

5 Ibid. A.9805 (Fitch, former H.M.I.) AA.11746-11754 (Kekewitch) A.10350 (C.A. Buckmaster)

6 Ibid. AA. 1211-1214

7 Ibid. AA.1070, 1183-1184

8 Ibid. A.11605

9 Ibid. 101

10 Ibid. 64

11 Ibid. 100

12 Ibid. 86

13 Ibid. 79

14 Ibid. 26

"gladly recognised", its "defects were those of constitution rather than administration ... too centralised and too specialised, too little able to adapt itself to the changes it has been the main factor in effecting ... too irresponsible in its modes and times of adaptation". "It was not originally intended to be a Department of Education at all, but to encourage the study of subjects ... that schools did not cover ... hence it is not so much education it has in view as instruction in special subjects". The "course of events" had "made it an Education Department ... duplicating and supplementing the Education Department so called". There was thus "duplication of inspection and a double scale of grants".¹

v) Developments towards unification

While one periodical believed that the Secondary Commission had dealt unfairly with the Department, suggesting that "the phenomenal rapidity with which it has issued nine stately volumes" suggested superficiality,² plans were soon afoot to effect some changes in organisation. A Bill which attempted to produce some rationalisation was introduced by Gorst in 1896;³ postponements to improved administrative accommodation were necessary "because the Department's position" was "materially affected,"⁴ but a total of 960 "hostile amendments" which would have entailed forty days merely on voting caused its withdrawal.⁵ (The question of the position of local authorities and their powers was the chief cause of dispute.⁶) The Education Department issued regulations in that year which distinctly specified that no schools (as distinct from pupils) receiving their grants would be eligible for those given by the Department. As a result, "ex-VII classes" were largely abandoned, and their pupils drafted to "Organised Science Schools".⁷

Donnelly repeated his claims that there was "constant intercourse" between the two Departments to the Select Committee on Museums: the Departments were "united and co-ordinate", he said, but he agreed that business was done by correspondence and that he exercised discretion in papers passed on. He admitted that there was "no Minister for Secondary Education", and that he had been "labelled by the Secondary Education Commission as the one dissentient" on plans

1 R.C.S.E. 99, 101-102

2 Engg. 27 December 1895

3 Hd. XXXIX (1896) 526-539 and 769

4 Ibid. 673

5 Ibid. 526-539, 745, 1574

6 Hd. LXIII (1898) 667 (Devonshire)

7 D.S.A. 44th Report X

to merge the Departments.¹ That Committee recommended the re-introduction of the "Board" system which had fallen into disuse,² as a measure, presumably, to bring about what its members believed would be better control of the officials.³ (Donnelly asked for "the definition of a Board" and said that he knew of no other Office with such an organisation.⁴) So far as can be ascertained, despite the recommendation, the "Board" never met again.

In August 1898 Devonshire, the Lord President, presented a "Board of Education Bill" in the Lords. He dealt with the County Council - School Board rivalry, and said that the two Departments would be combined "under one Secretary as one Office". He specifically mentioned Donnelly's impending retirement as providing an opportune time for the merger, and promised a full-scale reorganisation of all Departments.⁵ The local Authorities' conflict once more ended any further progress at that point, but Devonshire assured a Manchester deputation that "Technical Education would remain closely connected with the Department".⁶ There was "now a minimum of overlap", claimed Gorst in 1899.⁷ A further Bill was introduced by Devonshire in 1899: it was "intended to regularise the position in Secondary Education".⁸ While disquiet was later expressed at the use of the phrase "Science and Art Technical Branch" as part of the new organisation,⁹ Gorst pledged that there would be a Secondary branch as well. This Bill was passed.¹⁰

vi) The final organisation

The actual amalgamation took effect from 1 April 1900,¹¹ so that the old Department did not, in fact, see the dawn of the new century. Art, Science and "Technical Education" were still located at South Kensington: "Elementary and Secondary Education" were at Whitehall.¹² Kekewitch became the Civil Service Head, Abney, Francis Reid Fowke, Alan Cole, H.A. Bowler and Gilbert Redgrave were the chief officials of the "Science and Art Technical Branch".¹³ A Secondary Education Bill which finally abolished the term "Science and Art", merged the Technical Education branch with the Secondary branch, but established

1 S.C.M. (1897) AA. 720, 822-834, 1505, and 1707.

2 Ibid. AA. 95, and 1503 (Donnelly)

3 S.C.M. (1898) lxxxii

4 S.C.M. (1897) A. 1505 and S.C.M. (1898) A.720

5 Hd. LXIII (1898) 666-679

6 Nat. 9 March 1899

7 Hd. LXX (1899) 56

8 Hd. LXVIII (1899) 668-670

9 R.P.Scott F.R. N.S. LXVII (January June 1900) 186-197

10 Hd. LXXIV (1899) 105-106, LXXV (1899) 1081-1106, LXXVI (1899) 255.

11 Hd. LXXIX (1900) 772

12 Hd. LXXXII (1900) 661

13 D.S.A.O.B. 29 and 30 March 1900.

one "literary" and one "technical" Secretary in that section, and transferred "the greater part of the Staff" to Whitehall, was passed later that year.¹

The "First Report of the Board of Education" gave "a gratifying story of better equipment, improved methods, and saner ideals"², while an old critic of the Department "rejoiced that higher elementary schools now receive the benevolent approval of the Board ... instead of Science and Art Department obstruction".³ A "Directory with regulations ... for school and classes ... in connection with the Board of Education South Kensington" was presented to the Commons (as it will be recalled, the old Directory was not, of necessity) in June 1901.⁴ There was "co-ordination of technological work",⁵ an allocation of responsibility for all evening schools to "South Kensington"⁶, and a new system of grants which placed even greater emphasis on attendance⁷ in that year.

As has been noted, the "old" examinations continued until 1917, although their value now was in the qualification that they offered. Abney, despite doubts on "whether he would be liberal on secondary education",⁸ served until 1907, and acted as "scientific adviser" until his death in 1920.⁹ The appointment of Robert Morant as successor to Kekewitch in 1902¹⁰ led to a complete re-organisation of the Secondary Schools which involved a "liberalisation" (some might argue "academisation") of their curricula. The passing of the Education Act of 1902, which abolished the old School Boards, gave permissive powers to the larger Local Education Authorities to develop secondary education facilities. As is pointed out later, the old "secondary schools", whatever their individual designations, were there to be built upon, thanks to the efforts of the Department. However long the struggle may have been for the achievement of a unified system, it had at last been achieved.

i) The chief officials

i) The end of the Civil Service joint Headship

It could hardly have been claimed that the eleven year arrangement of a Civil Service Head of both Departments had been a success. While Sandford

1 Hd. LXXXIV (1900) 1031-1144, LXXXVI (1900) 796-802

2 Nat. 20 December 1900

3 Hd. LXXXII (1900) 661 (Yoxall)

4 Hd. XCVI (1901) 6

5 Hd. XCV (1901) 278

6 A. Abbott Education in Industry and Commerce in England and Wales (Oxford University Press 1933) 39

7 S. Cotgrove Technical Education and Social Change (London Allen and Unwin

8 Hd. LXXXVI (1900) 798 (Spencer)

9 D.N.B.

1957) 39

10 D.S.A.O.B. 3 November 1902

appears to have been given effective power, holding Boards on his own in the absence of the political chiefs,¹ his personal influence on the development of the Science and Art Department does not seem to have been great, and there was certainly no increase in co-operation between the two Departments during his period of office. With Sandford's retirement in 1884, two years after Donnelly succeeded Macleod as the effective head at South Kensington, it was officially announced that the Department would no longer be "amalgamated".² It was later alleged that Cumin, Sandford's successor at the Education Department, had refused the "joint" post, but Donnelly denied this, and added that Spencer, then Lord President, "considered it right to separate the two".³

ii) John Donnelly: Fidus Achates

Donnelly thus became "Secretary and permanent head of the Science and Art Department, responsible for its general efficiency", and continued to hold the post of Director of Science,⁴ until 1893, when Abney took over to allow Donnelly to concentrate on overall administration. One immediate consequence of the new regime was a posthumous rehabilitation of Cole: "My Lords" agreed to purchase a portrait bust for exhibition in the Museum.⁵

Donnelly saw himself as "chief of the executive at South Kensington" through whom passed "all correspondence, Minutes and official work" to the Heads of Department. He was "not an Art expert" and his "only connection with Art" was "administrative".⁶ His military connections were not always favourably viewed by others. While one magazine could publish an engraved portrait of the Secretary in full regimentals, and say that the "rank and file are with him as the custodian of another man's purse",⁷ another could allege "Let me drill the country, says the Colonel ... the teacher is a poor private and the examiner is his officer ... the Colonel still has his early belief in a shilling a day."⁸ The "military element" received particular criticism in the events which led up to the setting up of the Select Committee on Museums at the end of the century.

Donnelly met his Cardwell in Acland: the politician must have seen the old soldier as an implacable reactionary, wedded to his beloved system of

1 S.C.M. (1897) A. 332 (Donnelly)

2 D.S.A.O.B. 21 May 1884

3 S.C.M. (1897) AA. 816-818

4 D.S.A.O.B. 21 May 1884

5 P.M. XXII (12 March 1883)

6 R.C.T.I. A. 2841 and S.C.M. (1897) A.1019

7 S. and A. March 1888

8 Engg. 29 November 1889 (G. Holliday)

"payments on results": as has been detailed, Donnelly clung to the system which he inherited from Cole long after it had served its purpose, but he was prepared to allow changes in the face of criticisms which he felt to be well-founded, and in terms of the reality of pressure of business which the success of the Department, under his leadership, had caused. He was assailed by most members of the Select Committee on Museums: "no witness ... has ever been subjected to such a prolonged course of petty ignorant spite and vexatiousness ... there is little doubt that the persistent irritation told on his health", said Nature.¹ Critics charged that his testimony was "full of strange slips" and that he was "often unable to answer questions",² but on the whole he stood the onslaught well, and found time in its midst to write a letter to Nature on "cocaine as a remedy for bee-stings".³

The Duke of Devonshire, in announcing that Donnelly's retirement (which was due, under the rules, on 8 July 1899) would provide an opportunity for re-organisation, paid a tribute to "a devoted public servant ... the strength of whose convictions and the energies with which he has supported them ... have exposed him to a larger share of criticism than his predecessors".⁴ (The Art Journal merely recorded the "retirement after forty years service".⁵) At a testimonial dinner, Gorst, the Vice President, toasted a "most loyal servant ... and personal friend", and Donnelly must have been particularly pleased at the fact that he received a special gift from the "stokers, attendants and labourers".⁶

Donnelly resembled his patron Cole in his variety of interests, and in his ability to take a leading part in a number of activities outside his work for the Department. His active involvement in the Society of Arts was of particular importance, as has been recorded. In its obituary of Donnelly, Nature said that he "preferred the circle of his friends, many of them prominent in Science and Art, to Society".⁷ His deep and lasting friendships with Lockyer and with Huxley, in particular, were to be of great importance to his Department. Despite the shared views of both men on "organised religion",⁸ Donnelly christened his second son Gordon⁹ Huxley, and he once told his friend

1 Nat. 10 April 1902

2 M. of A. 1897 79-81

3 Nat. 8 September 1898

4 Hd. LXIII (1898) 675

5 Art J. 1899 288

6 Nat. 7 December 1899

7 Ibid. 10 April 1902

8 Chapter XVI section (c)

9 After his "old friend" Gordon.

that "Huxley, unlike his godfather, is fast asleep on the sofa".¹ He attempted to find a locum for Huxley at the time of the latter's illness in 1872, but had to tell him that he had been unable to obtain Treasury sanction,² and at the time of another illness in 1884, said that he would "give you a laboratory and read in the Library ... drop the Royal Society ... but remain as Dean",³ urging him the following day to "get your liver and lights in order".⁴ He acted as an intermediary when Huxley became a Privy Councillor⁵, and, at the time of the latter's final retirement from the Royal College of Science, advised him "not to let the intriguing scamp Acland ... worry you out. When you want to go, go on your own account".⁶ In his last letter to Huxley, sent at the time of his friend's final retirement, he was "sorry ... at the severance all together ... it is too dreadful to contemplate".⁷ The tone of banter in many of his letters to Huxley suggests his relief at being able to relax with a friend. He told Huxley that he "did not turn up my nose when asked to meet my sovereign in a place of worship"⁸ and at the time when he was invested with the K.C.B., was sorry that Huxley could not "come to see the people at Buckingham Palace ... they didn't call on us after our marriage",⁹ He later talked of "Tum Tum's levee".¹⁰

Donnelly had letters printed in Nature on bird migration and the possibility of simultaneous observations,¹¹ and one, in very technical language, possibly culled from his membership of the Solar Physics Committee, on the use of the pocket spectroscope in connection with the "Krakatoa sunsets" of 1883.¹² His interest in Art went beyond that of an administrator. He showed Cole the etchings and sketches he had made on his Italian holiday, after the death of his first wife, in 1874,¹³ he exhibited water colours at the Royal Academy and at the New Gallery,¹⁴ and "he regularly sketched during his yearly holidays".¹⁵ He was also a member, with Poynter and others, of a Committee formed to "preserve the monuments of Ancient Egypt".¹⁶

1 MS letter Donnelly to Huxley 27 December 1884

2 MS letter Donnelly to Huxley 20 February 1872

3 MS letter Donnelly to Huxley 18 September 1884

4 MS letter Donnelly to Huxley 19 September 1884

5 MS letter Donnelly to Huxley 20 June 1892

6 MS letter Donnelly to Huxley 24 September 1894

7 MS letter Donnelly to Huxley 28 May 1895

8 MS letter Donnelly to Huxley 22 June 1887

9 MS letter Donnelly to Huxley 1 June 1893

10 MS letter Donnelly to Huxley 1 March 1894

11 Nat. 30 January 1879

12 Ibid. 6 July 1883

13 Cole MS Diary 11 October 1874

14 D.N.B.

15 Nat. 10 May 1902

16 Colonel R.H.Vetch Memoir (Privately printed)

It was probably Lockyer who wrote the Nature obituary which described Donnelly as "sensitive and reserved, with an almost over bearing sense of rectitude".¹ The criticisms of Halliday, who described Donnelly as a "drill-master", have been noted. Abney told Cole that it was unfair to describe Donnelly as "rigid", but he said that he had "irritated high people. I named the Duke of Edinburgh".² His testiness during the Goffin investigation has been recorded, and Huxley believed, at the time of the Athenaeum election, that his friend was "hot", but added that he was "generous" and could "wipe the slate".³

It was Donnelly's misfortune that he was in charge of the Department at a period of more thorough public examination of its internal affairs than had prevailed in the time of his predecessors. He had only two relatives remotely connected with the Department, Julian Marshall, whose compilation of the catalogue of engraved portraits was so criticised by the Select Committee on the Museums, and another cousin, Arthur Jeffekin, who was a sub-inspector of drawing in Elementary Schools in the Southampton area.⁴ The evidence to the Select Committees show that Donnelly had told his political chiefs of his family connections with both men before their appointments, but the charges that South Kensington was a "nest of nepotism" involved the completely innocent Engineer. There can be little doubt that Donnelly was hurt by the insinuations of the Museums Committees, and his letter to Playfair at the time on the subject of Robinson, already quoted, shows that he regretted his sympathetic treatment of the former Keeper in 1887. Donnelly died less than three years after his retirement. With Cole, he ranks as a creator and sustainer of the Department and its system, particularly in Science. It is possible to criticise him on the grounds of conservatism in his retention of certain aspects of the system beyond the point of maximum utility, but without the initial stimulation he devised, with Cole, developments would have been much more slow, and there would have been even less upon which to build after the amalgamation of 1900.

iii) Science Officials

Iselin, Donnelly's Assistant Director, suffered a prolonged illness for at least a year before his death in 1884. Donnelly was in great doubts about

1 Nat. 10 May 1902

2 Cole MS Diary 20 January 1882

3 MS letter Huxley to Lockyer 15 February 1888

4 MS letters Donnelly to Huxley 5 and 27 January 1894.

the succession. He hoped that Carlingford, the Lord President, would make the selection between Francis Fowke, who had carried out Iselin's duties, and Abney, but was "caught in my own trap" when he had to admit that "knowledge of Science was necessary for the post: he told his chief that he was "never very sure of Abney, who has a strong liking for putting his name to original work, and that if it were a private business I should support Fowke", but the scientific claims of Abney obtained him the post, and Donnelly hoped "that it will be all right".¹ The Minutes record Abney's appointment, but Fowke was informed that his "zeal, energy and ability" were "appreciated by My Lords, and would not be lost sight of".² Fowke continued as Official Examiner in Science, and succeeded Abney as Assistant Director when he in his turn succeeded Donnelly as Director. When the Department was merged with the Education Department, Abney became in turn "Principal Assistant Secretary, Science and Art Department (the post of Director of Science was abolished)³ and Head of the South Kensington branch of the Board.⁴

iv) Art Officials

Thomas Armstrong, Poynter's successor as Director of Art, "hesitated before accepting the position, and was prepared to do so only if it were part-time, and he should have a studio in the Art School".⁵ He had "no background of training or prestige" and "had been pitch-forked into his position" charged an M.P.,⁶ despite his apprenticeship to Ary Schefer in Paris, when he was a Bohemian comrade of du Maurier, Whistler and Poynter.⁷ He later recorded that one of his first duties was "to bring to order" the "rebellious and troublesome members of the Dublin School of Art".⁸ His contribution to the development of the Department's system included the encouragement of modelling, which he saw as "having an enormous influence on sculpture",⁹ and in the development of Summer courses for Art teachers.¹⁰ Although due to retire under the age rule in 1897, he served for an extra year: Donnelly said that this was because his services were needed in connection with the final transfer

1 M.S. letter Donnelly to Huxley 21 May 1884

2 P.M. Misc. 56,601

3 D.S.A.O.B. 29 June 1899

4 Ibid. 30 March 1900

5 Art J. 1891 272 and Armstrong A Memoir (London Secker 1912) 51

6 Hd. CCCXIX (1887 1547 (M. Conway)

7 Gaunt op. cit. 27

8 Armstrong op. cit. 51

9 Ibid. 65

10 Ibid. 66

of Drawing to the Education Department,¹ but critics alleged that it was because he was "an uncompromising upholder of South Kensington" who would give favourable evidence to the Museums Committee.²

Armstrong's successor was Walter Crane, who had had no formal Art training beyond a period of apprenticeship to a wood engraver, but "had studied painting at some time".³ He had formerly been Director of Design at the Manchester Municipal School of Art, and saw "design" as being firmly based on "the ability to draw".⁴ He combined the duties of Director with those of Principal of the Royal College of Art on the retirement from that post of Sparkes. It was announced that his appointment would be a full-time one.⁵ The Art Journal, which had said "It will be interesting to see his progress" when he was appointed,⁶ claimed when he retired from the post after just over a year of service, that this was because he "found the ties ... too exigent. The most earnest reformer will find the work of undoing the system, ... will be the labour of a life-time".⁷ While Crane continued as a member of the Council of the College of Art, he was succeeded as Director and Principal by A. Spencer, whose term of office extended beyond the separate life-time of the Department.

v) Museum Officials

On the retirement of Philip Cunliffe Owen as Director of the Museum in 1893, his office was divided into two sections, Art and Science, with J.H. Middleton in charge of the former and Major-General E.R. Festing responsible for the latter.⁸ This was seen as "proof that the Museum is too heavy a burden for one man".⁹ On Middleton's death in 1896, he was succeeded by C. Purdon Clarke: the appointment was welcomed by the Art Journal as "auguring a change for the better".¹⁰

vi) The "Carry-over"

The "family concern" survivors were Alan Cole and Francis Reid Fowke. The former served in the Board of Education until 1908, and did not die until 1934. The latter, as has been noted, eventually succeeded Abney as Assistant Director for Science, and also served on after the amalgamation, as an Assistant

1 S.C.M. (1898) A.399
 2 Ibid. lxiii
 3 D.N.B.
 4 Art J. 1893 363
 5 Hd. LXII (1898) 1323
 6 Art J. 1898 316
 7 Ibid. 1899 222
 8 D.S.A.O.B. 9 July 1893
 9 Art J. 1893 279
 10 Ibid. 1896 250

Secretary.¹ Thus, despite the death of Playfair in 1898, just before the end of the Department's existence,² and that of Donnelly just after it, there were "personal" connections of the Department with educational administration almost into "Hadow" days.

¹ D.S.A.O.B. 29 March 1900

² Nat. 7 December 1899, in a review of Reid's biography said "so long as South Kensington exists ... there is no need to look for a memorial to Lyon Playfair".