

Lined with Gold: London University and the Colour of Science

by Bruce Christianson

Faculty colours for academic hoods are a surprisingly modern development. London University seems to have invented the first British system of faculty colours, out of whole cloth as it were, in 1844.¹ But in 1862 this first system was swept away and replaced by a second, radically different system which, amid other changes, altered the colours assigned to the various faculties.² It is this second system which is (with some modifications) recognizably still in use at London University today.³

London was also the first British University to establish bachelor's and doctor's degrees in Science. These degrees were instituted in 1860,⁴ and were thus conformed to the new faculty colour scheme from the beginning, with the colour of Science being yellow-gold.⁵

¹ Here I use the term 'faculty colours' to denote a system of academic dress where (a) alternative degrees, such as BA, BSc, BCom etc., are differentiated by the systematic use of a colour distinctive of the particular degree and (b) successive degrees, such as BSc, MSc, DSc use the *same* distinguishing colour. In this sense, Cambridge did not acquire a faculty colour system until 1934.

² For a description of the original London system see Nick Groves' 'With Velvet Facings'.

³ A description of the system of academic dress currently in use at London can be found at <http://www.london.ac.uk/fileadmin/documents/about/governance/ordinances/Ordinance_012_annex.pdf>, or in the little book by Philip Goff. This system, in most respects other than the colour of linings, still follows closely the interpretation of Cambridge academic dress prevailing among London tailors in the 1860s (see Nick Groves, 'Evolution of Hood Patterns', p. 19). But the introduction by London of faculty colours was an innovation based upon no obvious indigenous influences.

⁴ It was the MSc, not established until 1914, which first introduced at London the dangerous modern practice of having both a master's degree and a distinct doctor's degree with the same nomenclature co-existing in the same faculty. The appearance of this precedent, although not of course the reality, had earlier been avoided in the London Faculty of Arts by the artifice of introducing the DLit. See Simpson, pp. 34–36, 92, 48–49.

⁵ The colour was originally a rich yellow gold, and not the poor lemon yellow of later years. See note 17 below. It may be worth mentioning that Convocation had previously considered, but did not adopt, a suggestion to use a gold lining (rather than the eventual

London's innovation of lining hoods with faculty colours was enormously influential, in that it eventually persuaded many new and existing universities around the world to adopt a faculty colour system for their academic dress in whole or in part. However, other universities appear to have copied the *idea* of a faculty colour scheme, rather than adopting the details of the London system or following the same choice of colours.⁶ In my opinion, a notable early example of this type of London influence occurred at Cambridge in 1889.

Prior to 1889, the practice at Cambridge was for all doctors to use a pink lining for their hoods.⁷ The adoption in 1882 of the new doctorates in Science and Letters at Cambridge led to a debate about whether the new doctors should wear the same robes as the old, and in 1889 the different faculties all adopted distinctive colours for the lining of their doctors' hoods.⁸

It is difficult to escape the possibility⁹ that the idea of associating differently coloured linings with degrees in different faculties was a seed which had been planted, possibly unconsciously, at Cambridge by a generation of exposure to the London system, which by 1889 had been stable for over twenty-five years.¹⁰

The resulting halfway house was to persist for over forty years. Cambridge did not acquire a full-blown faculty colour system until the sweeping reforms of

white) to distinguish those holding the degree of BA who were of sufficient standing (three years) to be eligible for membership of Convocation (Minutes, 8 May 1860, Appendix 2, 'additional suggestion' no. 2). Interestingly, the white lining introduced with the new system was limited to those who had actually become members of Convocation.

⁶ By 1934, when Cambridge finally succumbed, a number of English universities (including Birmingham, Liverpool and Sheffield) had already followed London's innovation and adopted systems of faculty colours. Others (such as Bristol and Reading) had not, and did not. In particular Bristol, like the CNAAs much later, preferred to use different coloured linings to denote rank rather than faculty, cf note 10 below. London itself appears to be backsliding somewhat on the issue of late, and in September 1994 declared a moratorium on new faculty colours: see the references in note 3 above.

⁷ See for example Gutch, Wood, and Groves, 'Historical English Academic Robes' (especially p. 60). Different shades of pink were provided by different tailors, and as noted by Groves (*loc. cit.*, n. 7), London tailors making Cambridge robes often substituted a pink-looking shot silk (*vide* 'DCL Cantab', *Notes & Queries* 2nd ser., V, no. 129 (1858), p. 502).

⁸ For more detail on the mechanics of the 1889 reforms, see the excellent account in Baker.

⁹ I suggest this possibility in 'Oxford Blues' (p. 26, n. 11) but do not there enlarge upon it.

¹⁰ Franklyn to the contrary notwithstanding, the different colours then used at Oxford were historically a sign of status—degrees in Divinity and Canon Law took twice as long as those in Civil Law and Medicine—rather than of faculty *per se*. Buxton and Gibson's gloss (p. 38) that 'by a curious change the colours have ceased to be faculty colours and have become associated with rank' precisely misses the point. It is faculty colours which are the innovation, and the scheme that they describe which is the status quo ante. But see my 'Oxford Blues' for more on this theme.

academic dress in 1934 when, amongst many other radical changes, the colours chosen for doctors in 1889 were systematically extended to lower degrees.¹¹ The original proposals for reform put forward in 1932 were for bachelors' hoods to be black, lined with the faculty colour silk, and edged on the cape with white fur (Franklyn, p. 178, (3)–(5)). By the time of the second report, in 1933, this had been modified to a hood made of the faculty silk, with white fur facing the cowl and edging the cape (Franklyn, p. 183, 184–85, (3)–(5)), which was the ordinance eventually promulgated by the Grace of 28 February 1934. I have commented upon these proposals elsewhere,¹² but I cannot resist digressing here to advance an heretical hypothesis regarding the precedents for this inside-out element of the 1934 reforms.

In 1922, possibly under the influence of London, the University of Toronto modified its original Oxford-based system¹³ by the adoption of a faculty colour system for new degrees.¹⁴

In both the post-1934 Cambridge and the post-1922 Toronto schemes, bachelors' hoods are made of faculty colour silk, trimmed with fur, and masters' and doctors' hoods of black or scarlet respectively, lined with the faculty colour silk. Franklyn's support for this arrangement at Cambridge in 1932 (Franklyn, p. 180, I (c)) may have been coloured by his knowledge of the earlier developments at Toronto,¹⁵ as well as by the freakish Cambridge MusBac hood (Franklyn, p. 183).

However, returning to the choice of colours in 1889, all the Cambridge faculties except Letters (scarlet) decided in the event to retain some shade of pink. Science followed Divinity in using a pink shot silk,¹⁶ of the type regarded as characteristic

¹¹ See Franklyn, pp. 177–95. for an account of the whole sorry affair, including verbatim reproduction in their entirety of council's three reports to senate.

¹² 'Oxford Blues', p. 26, n. 11.

¹³ An excellent secondary source on the development of academic dress at Toronto is Matthew Cheung Salisbury's (as yet) unpublished 'By Our Gowns Were We Known'.

¹⁴ The first colours thus assigned were to Architecture, Commerce, Forestry and Engineering. The use by Toronto of orange for Commerce may betray a London influence, London having adopted orange for Commerce in 1920.

¹⁵ Franklyn was a good deal more knowledgeable about North American academic dress than his rather disparaging public attitude towards it might suggest. Indeed, my copy of Haycraft, 5th edition, contains a note from Franklyn to a Saskatchewan graduate, enquiring (in Franklyn's execrable handwriting) about certain details of Canadian hoods.

¹⁶ Science chose pink shot light blue. I still remember my disappointment, many years after first reading this fairy-tale description in *Pears Cyclopaedia*, upon encountering the grim reality. The appearance is similar to the grey of an Oxford DSc or DLitt, although at least the latter gradually fades to an historically correct coral pink as the dye oxidizes. It may be worth remarking that the Cambridge Science silk was referred to as 'light grey shot with rose pink' in the first report of 1932 (Franklyn, p. 177). The canonical description appears in the second report of 1933. The reference to London tailors using silks shot with light blue is 'DCL Cantab', loc. cit. (see note 7 above.)

of London tailors: perhaps the scientists and divines were more accustomed to shopping in the metropolis. Nevertheless, just as the use of shot silk had been spurned by the University of London,¹⁷ use of the colour gold was shunned by that of Cambridge.

Gold silk was, however, officially adopted in 1882 by the Victoria University of Manchester for lining the hoods of ‘Doctors of Literature, Doctors of Philosophy, and Doctors of Science’, four years before the first doctor’s degree was actually awarded, in Medicine, in 1886. At first blush it seems unlikely that Victoria’s somewhat distinctive doctoral robe could have been inspired by the London DSc. Nevertheless, the similarity of the relevant regulations is suggestive.

The 1882 regulations of the Victoria University state:

The gowns for graduates shall be alike for the two Faculties of Arts and Sciences, and of the same pattern as those worn by Cambridge graduates, except that the Doctors’ gown shall be the same as the Masters’.

Now, here are the regulations for the DSc robe from the 1880 University of London *Calendar* (and remember that that in 1880 the London robes were still approximately in the Cambridge pattern):¹⁸

A black stuff or silk gown of the same shape as for the Master of Arts. Doctors of Science who are Members of Convocation shall also be entitled to wear a scarlet gown faced with gold coloured silk.

The London regulations are worse than confusing: the failure to specify that the scarlet dress robes are of a different pattern to the black undress gown is actively misleading.¹⁹

¹⁷ At least initially: Fr Philip Goff points out to me that the original solid gold silk used by London for Science had by 1940 been widely supplanted by a gold silk shot with white. This latter silk, which appears lemon yellow in some lights, was in turn replaced some time in the 1980s with a plain lemon yellow silk that persisted until quite recently. Other uses of shot silk by London include Engineering (green shot white) since 1902, and the silver grey (actually black shot white) used instead of a faculty colour by those degrees instituted since the 1994 moratorium. I am indebted to Fr Philip Goff not only for access to samples of early silks used by London, but also for providing me with copies of a number of Senate minutes.

¹⁸ As late as 1898, Vincent’s *Cutter’s Guide* says (p. 76): ‘Hoods of London University same shape as Cambridge’.

¹⁹ The first official mention of scarlet robes at the Victoria University of Manchester does not occur until 1889, the same year as the Cambridge reforms. In that year the footnote ‘doctors who are members of convocation are entitled to wear scarlet’ was added to the academic dress regulations in the *Calendar*. In reality doctors were already wearing scarlet robes at Manchester well before this time, but the regulatory reference to

Imagine a tailor attempting to fabricate a Manchester doctor's robe for the first time. Suppose that they have in front of them the Manchester regulations and a description of a London DSc robe,²⁰ but that they have never actually seen the latter. The result would be almost exactly the robe we know.

Of course, the Manchester robe could be based more directly upon a misunderstood description of Cambridge doctoral robes. The Manchester regulations refer explicitly to Cambridge, and the cut out on the Manchester master's gown is the old Cambridge boot pattern (see my 'In the Pink', p. 55, n. 11) rather than the London variation of it. The Cambridge doctors' robes were, prior to 1889, all trimmed with the same silk used to line the hoods (pink), and the lining of gold silk prescribed for the hoods of all doctors at Manchester had already been settled in 1882.

But why was gold chosen? I have no answer to give, but of the London degrees corresponding to the three original doctors' degrees at Manchester, it is the DSc which stands first in the London *Calendar*.

Coincidentally a similar misinterpretation of written regulations and Cambridge practice seems to have happened in the University of New Zealand, where a regulation inserted in the *Calendar* in 1938 says: 'doctors may on special occasions wear a scarlet gown'. This has always been interpreted by New Zealand robe-makers as a scarlet gown in the same pattern as the black doctors' gown, which latter has from the beginning been prescribed to be that of a Cambridge MA.²¹

Convocation (a requirement which was dropped in 1914) betrays a residual London influence on academic dress at Manchester. An excellent and very full account of the development of academic dress at the Victoria University is given in the book by Philip Lowe.

²⁰ Interestingly, this description cannot be simply the London DSc regulations, because the tailor knows to trim the sleeves as well as the facings of the Manchester gown with silk. The two sets of regulations (London and Manchester) from which I have quoted are set out next to each other in Plate 7 on p. 5 of Lowe. I first examined this plate under the misapprehension that the regulations were set out side by side, whereas in fact they are one above the other. Consequently I began reading the description of the London DSc at the top of p. 196 of the London *Calendar* (reproduced at the top right of Plate 7) under the impression that I was reading the description of the doctors' robe in the 1882 Manchester regulations (which are reproduced at the bottom right of Plate 7). I had almost reached the end, and distinctly recall thinking 'they have omitted to mention that the sleeves are also trimmed with gold silk' (which they had!) before realizing my own mistake. The experience was somewhat disconcerting.

²¹ See the 1879 University of New Zealand *Calendar*, p. 63. I am indebted as always to Professor Noel Cox for sourcing material from New Zealand for me. The patterns used in New Zealand have at times been slightly out of phase with those used at Cambridge (see 'Wearing Mummy's Clothes' by Groves and Christianson). Intriguingly, the University of New Zealand from the first followed a hood system for bachelors and masters very similar to that later proposed and rejected at Cambridge in 1932 (see note 11 above). However, in

When academic hoods were reintroduced to the Scottish universities, most adopted some form of faculty colour scheme, but there is little sign of a London influence on colour choice. Glasgow, following the decision in 1868 to reintroduce academic hoods,²² chose to use a faculty colour system with gold for Science,²³ and various shades of red and purple for everything else. Edinburgh also originally used yellow for Science,²⁴ but it was lemon yellow, not gold. Following Edinburgh's change to green (statistically the most popular colour for Science worldwide) Glasgow alone in Scotland used yellow for Science, until Dundee acquired university status in 1967 and chose buttercup yellow.

The association of gold with Science in the American Intercollegiate Code (ICC), of which more below, is popularly justified as representing the wealth which scientific knowledge brings.²⁵ The University of Wales, with more realistic expectations or perhaps just a greater appreciation of the value of money, chose bronze (a yellow silk shot with black) for Science from the beginning. Although the Wales faculty colour system is remarkable for its extensive use of shot silks, it shows no apparent enthusiasm for other London faculty colours.

A superficial examination of the older colonial foundations via Wood and Haycraft reveals no particular affinity between Science and gold. In Canada, King's and Queen's have very different systems, but both use old gold for Science. Mount Allison uses old gold for Science,²⁶ but also (anomalously) for the DCL. Acadia uses gold-yellow. McGill uses yellow by 1923 according to Haycraft, but the Science lining is given as mauve by Wood in 1882.

In Australia Adelaide, Sydney and Queensland all chose yellow for Science (amber in the case of Sydney),²⁷ whereas in India Bombay alone did so. In all these cases, there appears to be no systematic copying of other colours from the London

New Zealand the fur trim (actually a facing) for bachelors has always been on the edge of the cowl, and not of the cape, resulting in an NZ BCom hood being described in a recent inventory as lined 'orange with fluffy border'. Although a London influence might be suspected, as with Toronto, in fact the New Zealand use of orange for Commerce dates from 1906, fourteen years before London.

²² Glasgow University Court Minute C1/1/1, dated 4 March 1868.

²³ The precise colour is specified in Wood's 1875 catalogue as 'Whin blossom, Ulex Europae'.

²⁴ Lemon yellow is still listed as the colour of Science at Edinburgh in Wood (op. cit.), but I am indebted to Ronan Daly for pointing out to me that the change to green had by then already been published, in the 1874-75 Edinburgh University *Calendar* p. 181 (cf p. 174 of the 1873-74 *Calendar*).

²⁵ The statement that Science gets golden yellow for producing wealth is still repeated fairly often in the USA, as a Google search demonstrates.

²⁶ Incidentally, the first degree to be awarded to a female person by a British Commonwealth university was a BSc from Mount Allison, awarded to Grace A. Lockhart in 1875.

²⁷ They have subsequently been joined by Newcastle.

system, nor from the ICC. But could London have inspired the adoption of gold for Science in the ICC itself?²⁸ I shall argue that a more likely source of inspiration for Gardner Cotrell Leonard in choosing gold for Science is Germany.²⁹

Long before London introduced faculty colours to Britain, the continental universities had developed systems of colour to distinguish regents in the different faculties, although these colours were not applied to graduates more generally. Colours widely used to trim robes and headdress (although not to line hoods) in what is now Germany included dark blue for Philosophy, green for Medicine, red for Law and black or violet for Theology.³⁰ When Science began to establish itself as a separate faculty in the nineteenth century, many German-speaking universities adopted a variant shade of blue for it, reflecting the origins of Science in Natural Philosophy. However, a significant minority appear instead to have adopted some shade of yellow (or occasionally orange) for Science.³¹

²⁸ Another possible London influence on the ICC is the use of brown for Fine Arts. Red for Theology is an outside possibility.

²⁹ It is tempting also to consider Germany as a possible influence for the choice of gold by London, or vice versa. More research is in any case required, but the dates are extremely tight for any hypothesis of this type, and moreover London appears deliberately to have avoided outside influence or precedent. See for example the Senate minute of 25 June 1902 ‘the distinctive colour for the linings should be chosen so as to be different from the colours already chosen [...] by other Universities.’

³⁰ For example, Delitzsch writing in 1859 lists the colours in use at Erlangen since 1827 as black, dark blue, scarlet and green for Theology, Philosophy, Law, and Medicine respectively (the relevant passage occurs on p. 82 of Cusin’s English translation of *Isis*.) Although these colours had apparently occasioned some local controversy when they were (re)imposed, the translation offered by Cusin of ‘purple’ for ‘phoenecus’ (as the colour used by Law in 1743) in the passage immediately following is just plain wrong. It is fascinating to speculate that a slip of this kind may have misled Leonard into believing that purple was the historic colour of Law: the colours set out by Leonard (1896, p. 12) for these four ancient faculties are essentially the system of Heidelberg (Smith, p. 1057) with Law and Theology interchanged: in many places, including Heidelberg, violet rather than black was the historic colour of Theology. Heidelberg was later to adopt yellow as the colour of Science, but Erlangen instead gave Science the dark blue and returned Philosophy to the violet which it had enjoyed in 1743. I am particularly indebted to Dr Alex Kerr for bringing this passage from Delitzsch to my attention.

³¹ Smith, Vol. II, has Berlin (yellow), Frankfurt (yellow), Göttingen (yellow-brown), Heidelberg (yellow), Kiel (orange), Marburg (yellow), Rostock (yellow-brown), Würzburg (orange-yellow) among others, in this minority group. Early separate Science faculties among this group which could have influenced Leonard include Marburg (1840), Göttingen (1880) and Heidelberg (1890). Of these only Marburg predates London. I am indebted to Dr Thorsten Hauler for supplying me with information, and dates, for developments in Germany. He makes the point in a personal communication that yellow/orange was a natural colour choice for German Science, as it was by the nineteenth century the only untenanted part of the spectrum. See also the discussion in Hauler’s ‘Academical Dress in

Several of these colour associations correspond with those in the original formulation of the ICC, set out in Leonard's 1896 'Illustrated Sketch of the Intercollegiate System of Academic Costume': in particular (p. 12) green for Medicine, dark blue for Philosophy and gold yellow for Science, whereas Divinity and Law have interchanged colours with their German counterparts.

The list of colours in Leonard's 'Illustrated Sketch' is there stated simply to be 'based on historic reasons'³² However, a later article (anonymous, but showing signs of heavy Leonard influence) published in the *Albany Argus* (27 July 1902) expands on these reasons, and is worth quoting at length:

The white for arts and letters comes from the white fur for the Oxford and Cambridge BA hoods;³³ the red for theology follows the traditional color [...] used by cardinals for centuries.³⁴ The purple for law comes from the royal purple of the king's courts; the green of medicine from the stripe in the army surgeon's uniform and earlier from the color of medicinal herbs. The degrees in philosophy are shown by blue, the [heavenly] color of truth and wisdom; science, gold-yellow which signifies the wealth contributed by scientific discoveries. Pink was taken from the pink brocade [*sic*] prescribed for the Oxford doctors of music [...].

Of course, whether these are the actual 'reasons' for the choice, or simply justifications (mnemonics) for choices already made is a moot point. But a third possibility is that both colours and reasons are copied from somewhere else. The justifications given for red and purple sit oddly in a secular republic with Puritan origins: such divinity schools as existed were mostly Protestant, and the jurists were in the service of a republic not a king. And the reason given for blue has clear echoes of Delitzsch's *Isis*.

A fascinating final twist emerges from the academic dress for Southampton and Hull. Both these systems were designed by Franklyn, and both prescribe 'rich gold' for Science.³⁵ Certain of the other faculty colours show an ICC influence (e.g.

Germany', and especially his Table 1. Other continental systems use yellow for other subjects. For example France uses yellow for Letters; Spain and Portugal for Medicine. Similarly Science is green in Italy, amaranth (crimson purple) in France, etc.

³² And on p. 6 of the reprint of Leonard's earlier 1893 article for *University Magazine*, 'The Cap and Gown in America', he says only 'if hoods are to find general use in this country, the Oxford practice should be followed.'

³³ Bryn Mawr still use white fur in place of white velvet for the BA.

³⁴ In fact, since the election of Innocent III in 1198. Prior to this, cardinals wore purple. I am indebted to Richard Schlaudroff for access to a facsimile copy of Leonard's 1896 "Sketch", which is now rare, and to Dr Alex Kerr for a reprint of the 1902 article from the *Argus*, in which the quoted passage appears on p. 11.

³⁵ See the relevant entries in the 5th edition of Haycraft, pp. 10–11, 18–20, which are written by Franklyn. In the case of Hull the carefully defined faculty colours were never used on the hoods, and are now defunct.

orange for Engineering at Southampton, scarlet for Theology at Hull) while others (e.g. blue for Law, cream/ivory for Music) are consistent with a London inspiration.

It would be interesting to speculate further about Franklyn's reasoning³⁶ but, regardless of the origin, the use of gold for Science is thus one of the few colour associations bearing the imprimatur of both Leonard and Franklyn.

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³⁶ The beautiful and dignified use of mid-cerise for Arts at Southampton, for example, is close to the recent historically based proposals by Groves (see his 'Historical English Academic Robes', p. 61, n. 17).

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