

If Sir David Brewster was the inspiring force, the real powers behind the new Institution were the aeronautical engineer Sir George Cayley and Charles Payne.

Cayley had been chairman of the York Mechanics' Institute (f. 1827), and Charles Payne had been Secretary of the Adelaide Gallery, resigning in 1837 to help establish the Polytechnic.

The Polytechnic opened on 3rd August 1838. It was a media event. "The objects of this Institution", the *Year-book* recorded, "are ... the advancement of Practical Science in connection with agriculture, the arts, and manufactures".

The *Times* hoped (6th August 1838) that the new establishment would "merit and receive the support of the public". Within weeks, it had been visited by "vast numbers of persons" (*Mirror*, 1st September), "it being found an intellectual treat".

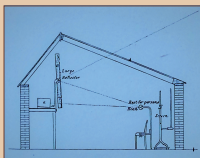
The Laboratory was open for "Chemical pupils", and there were demonstrations all day long:

- 12.00 Electrical experiments
- 12.30 Adventures with Microscopes
- 1.30 The "Pneumatic Telegraph"
- 2.00 Daguerreotype and Photogenic art.

Indeed, "No sooner do we enter, and pay our shilling at the door", said Peter Parley in 1855, "th[is] 'bang, bang, bang' goes the gong—a Lecture on 'a New Method of Blowing-up Sunken Vessels' is announced".

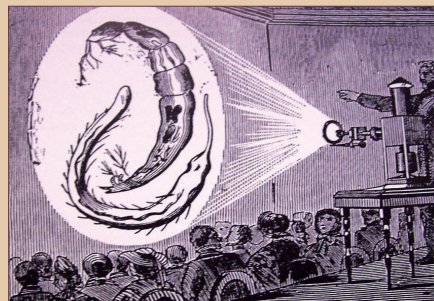
Dickens's *All the Year Round*, an enemy of "Useful Knowledge" and "Rational Recreation", recalled that "A flavor of chemicals ... pervaded the building, and suggested unpleasant instructive references to hydrogen, oxygen, and other gases". This was Sir George's Cayley's dream of sober scientific uplift in operation.

(Richard Beard, a former coal merchant, opened the first photographic studio in Britain on the roof in 1841. [see cabinet to left])



But the Polytechnic's printed programme for 1839 (see tall cabinet to your left) tells a rather different story. The biggest type face is reserved for the "DIVING BELL", in which Prince Albert descended a year later—an experience that put "Royal" approval into the name of the "Royal Polytechnic Institution". This may have been science in practice. But it was also science as thrill.

Some demonstrations were out-and-out sensational, involving "Two curious reflectors, by means of which whispers are heard and cooking effected at a distance of 100 feet", and "Cary's Hydro-Oxygen Microscope"—which, connected to a magic lantern, allowed you to see the real (disgusting) contents of a drop of Thames drinking water.



No wonder the public "responded". *Punch*, founded in 1841, was quick to lampoon the Polytechnic—a clear indication of popular success. The diving bell inspired new lyrics to the song "The Deep Blue Sea"—which became (of course) "The Deep, Deep Tank".

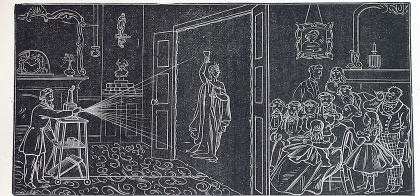
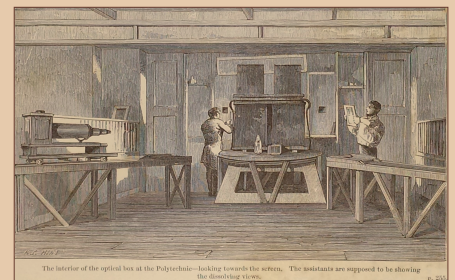


Fig. 9.—THE METHOD OF USING THE "PHANTASMAGORIA" MAGIC LANTERNS. See page 21.

In 1843, the Polytechnic introduced a new visual attraction, a development from the Phantasmagoria lantern show of its audience's parents and grandparents: "DISSOLVING VIEWS" (see lobby, and monitor to right.)



The interior of the spirit box at the Polytechnic—looking towards the screen. The substitutes are supposed to be showing the dissolving views.

The smooth and apparently magical succession, on a giant screen (nearly 30 feet in diameter!!!), courtesy of technicians in the world's first projection box (or "manipulating room"), of "one scene or object" after another, the first "gradually fading" from the view, while the other gains strength and distinctness" (reported the *Illustrated Polytechnic Review* for 11th February), was achieved through the use of a matched pair of Lanterns "of enormous size", with "lenses of the highest powers" ("constructed" by Cary himself), together with the new and brilliant "hydro-oxygen or lime-light".

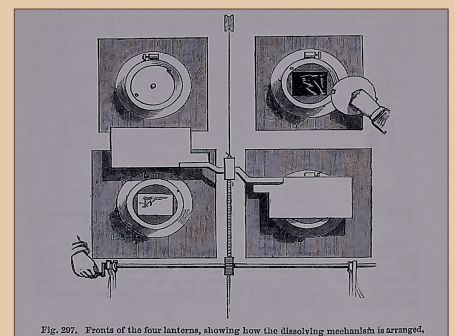
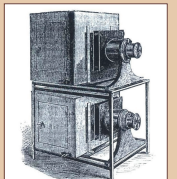


Fig. 207. Fronts of the four lanterns, showing how the dissolving mechanism is arranged.

"Artists of undoubted skill" like W.R. Hill (see cabinet to left) "were employed to depict upon the glass subjects of interest at home and abroad". At their most sophisticated—when, say, *The Chinese Feast of Lanterns by Day* (see lobby), was succeeded by *The Feast of Lanterns by Night*—they created the illusion of travel through time, as well as space. "Audiences applauded each successive image", writes Jeremy Brooker, "which was regarded both as a spectacle and a scientific marvel". Dissolving Views "attracted ... as many as 3,500 visitors ... in a single day", the *Morning Chronicle* reported, "and on occasion the programme had to be repeated 9 or 10 times".