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“Pictures never lie?”

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The Charles Close Society was founded in 1980 to bring together all those with an interest in the maps and history of the Ordnance Survey of Great Britain and its counterparts in the island of Ireland. The Society takes its name from Colonel Sir Charles Arden-Close, OS Director General from 1911 to 1922, and initiator of many of the maps now sought after by collectors.

The Society publishes a wide range of books and booklets on historic OS map series and its journal, *Sheetlines*, is recognised internationally for its specialist articles on Ordnance Survey-related topics.

Pictures never lie?

Chris Higley

When the Charles Close Society first published pictures of maps in its monographs and in *Sheetlines* the images were derived from simple photocopies or conventional photographs of printed maps. What you saw on the page varied in quality, but was as far as possible a true representation of a particular paper map. For the last dozen years or so, we have used scanners to produce digital images. These are then manipulated in various ways before being sent to press in electronic form. Using computerised production methods should result in much better quality pictures but does raise a question as to how much manipulation of a digital image is legitimate.



Some image processing is both necessary and desirable. For the majority of its history Ordnance Survey printed coloured maps by mixing inks to the required shades and depositing each colour in a separate pass through the printing press. When such a map is scanned, the composite image is not separated back into the original colours. Instead each square inch of the map is represented in the computer by around a hundred thousand or more dots or 'pixels'. The colour of each pixel is shown on the computer screen by a particular combination of red, blue and green light. This 'RBG' image is then converted into 'CMYK', the spots of cyan, magenta, yellow and black ink used by a modern printing press.

The printed image thus uses a different gamut of colours from the computer screen, but if the various conversions are done by capable software, possibly aided by competent human intervention, the end result should be a very acceptable facsimile of the original map.¹

Image processing need not stop there. We are familiar with newspaper photographs in which Adobe Photoshop, Corel Photopaint or other software has been used to erase the facial wrinkles or enhance the physical attributes of a fading film star; we may not realise that fading Ordnance Survey maps can be 'Photoshopped' in a similar way.

Figure 1 shows the raw unprocessed scan of a one-inch tourist map. The image looks discoloured and says more about the capability of the scanner than the state of the original map. By applying a (usually automatic) colour correction we arrive at figure 2, an image as close as I can get to the actual appearance of the dissected sheet in my hand. However, the reader's eye is distracted by the brown stain, the scuff marks just east of the pier, the crudely pencilled arrow and, in particular, by the wide gutters resulting from the dissection.

¹ As sometime editor of *Sheetlines* and also being involved in the production of the Society's books, I personally have had to learn these skills on the job and certainly do not regard all my own interventions as competent nor all the end results as necessarily acceptable.

For publication, I much prefer something like figure 3. The colours are brighter; blocks of the image have been closed up to disguise the gutters and clean patches of sea have been cloned and digitally pasted over the ugly marks and graffiti. We now have a representation of the map more as it would have emerged from the Ordnance Survey's presses in 1925, but it is a generic representation of the 5000 copies of that print run rather than a true representation of the current state of my particular copy.

We can go a lot further than this. Figure 4 gives the image false colours, adds a magenta squaring and transposes important information. This is a facetious example but it does illustrate the dangers of taking digital manipulation too far. After my recent book² went to press I realised that in erasing a previous owner's annotation from one scanned image I had also mistakenly removed detail which almost certainly formed part of the original printed map. To give another example, Soviet maps were sometimes relatively crudely printed on poor quality paper. By scanning them, adjusting the colour, sharpening the image and then printing on better paper, we can produce a result which is actually superior to the original map that we are trying to depict.

My own ideas on the legitimacy of these digital techniques have evolved as I have employed them. It all seems to depend on the context in which the illustration is used:

1. It is always desirable to correct the scanned image so that the printed picture is as close as possible in appearance to the actual sheet copied.
2. Where this sheet, as an artefact, is the subject of interest we should go no further than this. For example, in an article about a new state of Mudge's map of Kent being discovered in Timbuktu, the Timbuktu University Library stamp would remain visible in the illustration.
3. More commonly, the text of the article will describe a print run, edition or series of maps. The individual copy used for the illustration is of no relevance in itself. In this case I consider it reasonable, although definitely not essential, to correct fading, to cover up damage or blemishes and to remove library stamps and any other annotation peculiar to the particular copy scanned.³
4. Although less likely in Charles Close Society publications, a map may simply be a tool to elucidate a completely different subject. In an article on railways it is acceptable to scan any available out-of-copyright map of Brighton, artificially emphasise the line of Volk's Electric Railway and highlight other points of interest to the railway historian. The exact state of the original map is not of importance to the reader but, unless the alterations made to the image are obvious, it would still be good practice to include a note about them.

² Chris Higley, *Old Series to Explorer*, Charles Close Society, 2011.

³ Full digital retouching may not be possible without undue effort or at all. Authors must understand that editors find it a lot easier to create a reasonable facsimile of a silk purse if they are given something better than a poor photocopy of a sow's ear to start from.



Figure 1. Unprocessed scan of one-inch Brighton tourist map, 5000/25

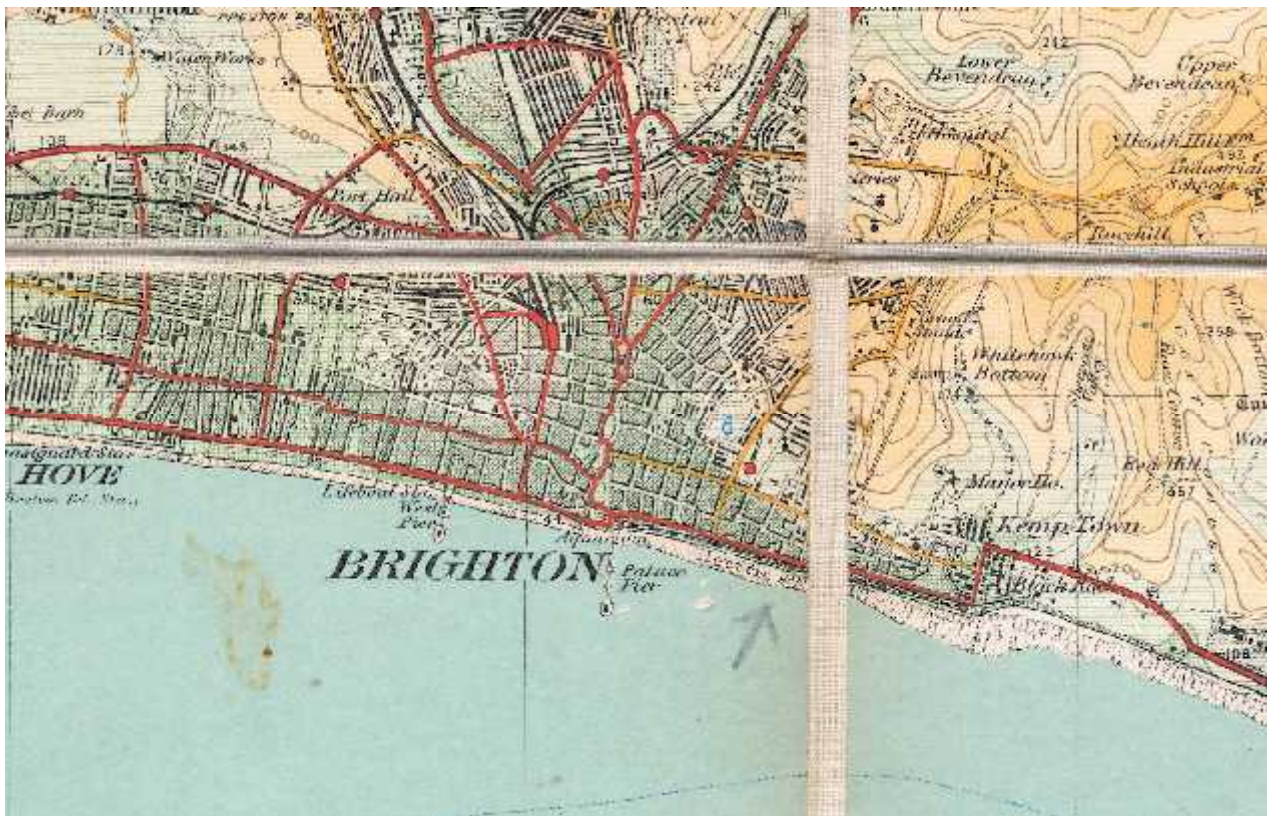


Figure 2. The corrected scan, as this particular copy appears today



Figure 3. Additional processing provides a much cleaner but generic image

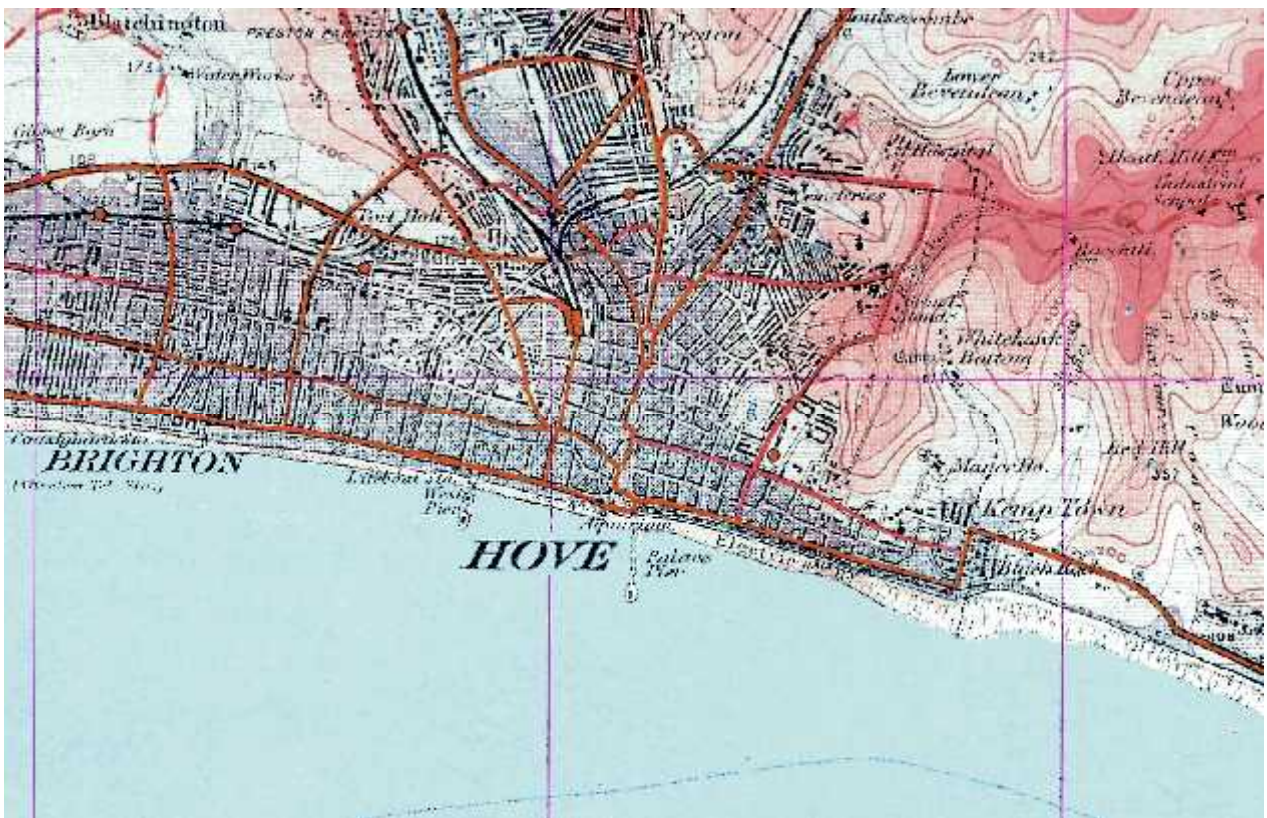


Figure 4. We can take things further still ...