

Visual Representations of Literacy in the Press

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Technical Report

1 Selecting and Cataloguing the Images

Using the findings from the pilot study, the project began by examining all the national daily newspapers available in England: the Daily Mail, Daily Mirror, The Express, The Guardian, The Independent, The Sun, The Star, and The Daily Telegraph. From these papers we decided that a contrasting sample could be provided by four papers: The Daily Mail, The Guardian, The Sun, and The Daily Telegraph.

We began by selecting one issue of each of the four. The research associate looked at these to familiarise himself with the papers and so that he could establish what he was looking for in selecting images. This also meant that he could get an overall impression of the type of images which occur in each paper and yet have a manageable number of images to work with in developing a system for selection.

Once the sample papers had been selected the next task was to identify one hundred sample images from each publication. Beginning at approximately 14th January of this year, each paper was scrutinised and one hundred images representing one or more of the categories of literacy practice outlined in the orientating framework, were identified from a period anywhere between two to three weeks depending on the paper in question. This process involved going back through the newspapers many times and in discussion with the research team, refining our original thinking. There are a wide variety of types of image in the papers and we also had difficulties in deciding the boundaries of an image - for example in montages and sets of images placed very closely together or typography and logos designed for their visual appeal. There are also many boundary cases, such as wearing a watch, car number plates, symbols and logos that are not strictly writing but are powerful semiotic markers on a continuum with it.

It was soon apparent that the category of writing on the body would dominate the corpus if every sporting image was included. To avoid having an unbalanced corpus with a proliferation of these images it was decided that only one instance of a sporting image should be included from each date of the paper in question. A separate index of all the other occurrences of images of this type was made. Similarly weekend editions were excluded as

it was felt they offered too much variety of format and style and were dominated by feature writing rather than news.

2 Deciding on the Unit of Analysis

We confirmed that the central unit of analysis would be the image. This was important to making decisions about assigning identification numbers and in organizing the files that would compose the hermeneutic project in Atlas-ti.

We decided, however, that for the analysis it was important to record the image within its accompanying context, since these are images designed to be read as part of a narrative. This we called an Item. Captions, headlines, other pictures or text in any combination could be included as part of the item. Thus the image was the central unit of analysis but its relationship to the other elements within the item were of interest. This is reflected in the structure of the coding map. The message conveyed by an individual image is determined by its unique framing:

- Within its context of the “news item” containing caption(s), headline(s) other graphics and text story
- Within its context of the whole page layout, and to a lesser extent, the whole issue of the paper.
- Within its context of all previous issues of that paper
- Within its broad context of the news media industry, not just press but TV etc.
- Within its context of traditions and genres of photographic representation (art, documentary, commercial)

3. Selecting the Images

We made a total count of the number of images in each newspaper before selecting those which contained literacy practices. To do this it was necessary to decide which images we would include in the total count. All images were included except for adverts, clip art, maps and graphs, and headshots.

From the total set of images, those with a literacy element were identified. This was done as inclusively as possible. Thus we selected not only images of literacy events, in which someone is interacting with a written text or some other literacy artefact, but also images reproducing literacy artefacts themselves, and of literacy in the environment, including on the body.

As mentioned above, the difficulties in deciding the boundaries of an image arose particularly where there were montages of connected and overlapping images and where there were sets of images placed very closely together within a single news item, obviously meant to be read together. In the end, we classified real "montages" as one image; overlapping images or images linked through the narrative of the item were counted as separate images, but given an ID which made it clear that they occurred together in the context of a single item.

Included: any image that contains a literacy artefact (e.g. computer, pen, lecturn), especially interested in images where people are interacting with such artefacts which we classify as “literacy events”

Excluded: advertisements, fictional images (e.g. stills from TV soaps), and graphics without a photographic element (i.e. not cartoons or maps). Non-linguistic semiotic markers (like logos).

We made a supplementary corpus containing many images that were seen as too marginal, in terms of our criteria, to include in the main study, but none the less are of some interest in terms of our theoretical approach to literacy. This corpus was almost as big as the main corpus but the distribution of types of literacy content was different within it, with many more images of literacy in the environment and reproductions of documents and correspondingly few literacy events.

4 Practicalities

We developed a procedure for selecting the images in the newspaper. First, the researcher went through a whole newspaper selecting and marking all the images in the paper that should be included. Each image was numbered in pencil and the total recorded on a separate sheet. Any boundary images were discussed with the research director, and a decision reached about whether to include them or not. We then went through the newspaper again and marked all those images containing literacy practices with a coloured sticker. In some newspapers we indicated the number of Literacy images on each page in the top corner if there was more than one.

Each full page containing a selected image was photocopied at 50%. Broadsheets were done in two sections and then cut and pasted together, so that they would fit an A4 sized piece of paper. Each item was also photocopied to fit on to an A4 sheet. Where the item was too large only the image was photocopied and where it was small, it was enlarged. All photocopying was done using the photo setting on the photocopy machine. The photocopies were numbered and filed in plastic pockets in date and numerical order, one for each newspaper. The ID of the picture, the date and page number of the paper from which it had originated were written on a sticker on the plastic folder.

We created, for each newspaper, an index sheet containing information about the individual issues (newspaper, date, day) and counts for the total number of images, total number of images depicting literacy practices, percentage of images containing literacy practices and the code number assigned to the photocopies in that paper.

5 Scanning Images

Using a canon scanner each image was scanned and saved as a jpeg graphic file. This choice of format allowed an easy transition from corpus directory to the analytical Atlas software. Proportions i.e. a scale of one to one was maintained where ever possible, the exceptions being where it was thought the image size (in terms of its memory requirements) was prohibitive. Those images that appeared in colour retained this attribute in every instance. Due to both the printing processes involved and the low quality paper used for obvious reasons in the newspaper industry, many of the images showed signs the moiré

effect. Steps were taken to correct this by submitting the image to a further descreening scan.

From very early on in the scanning process it became apparent that along with the scanned image a copy of the page from which it was taken would be an absolute necessity for meaningful analysis. Due to the size of the medium involved, scanning each page was not a viable option. Initially we thought of using a digital camera to capture each page, but this was dismissed in favour of the more convenient and simple solution of photocopies. Despite the significant drop in reproduction quality displayed using this method, it was not so severe that it affected any of the analysis and the subsequent discussion of page layout and image positioning. It was felt that these, along with a set of thumbnail prints, a comprehensive index, and the hermeneutic unit of the corpus in the Atlas software, all angles required for the project's analysis were covered.

Once all these processes had been completed it was decided that in light of the unstable qualities of the originals that they should be housed in suitable archive standard storage. Consequently in an effort to preserve their condition the papers were filed in special boxes in an acid free environment.

6 Creating the Atlas-ti Project (The Hermeneutic Unit)

The scanned images were imported into Atlas-ti as the primary documents of the corpus. This was a big improvement over NUDIST which we had used during the pilot project. NUDIST could only work with text documents so we had to create a verbal description of each image and code from this. Atlas-ti enables us to keep close to the primary visual data and to code directly from it. Sheets of thumbnails were produced, and these mini-images could also be called up on the screen in parallel to the Atlas-ti program.

Codes and text memos developed from our coding map were attached to the images by defining a rectangular portion of the image (known as a quotation) and creating a hyperlink with the code. Links between images could be made in the same way. Although much of the work takes place on-line, a variety of printed outputs from the project can be made available. This can be customised and we used the facility to create coding profiles of each image and summary matrices of the frequency of occurrence of codes and combinations of codes.

7 Evaluating the Software

We found Atlas-ti entirely adequate for the job we had set out to do in this project. We offer here an evaluation of the software based on our experience.

(1) Storing and retrieving the images was no problem.

(2) Attaching codes to quotations on the images was not technically difficult but we discovered (from consulting the software developer, trainer and other users through discussion list) that we were pioneering this use of the software and it took a while to design a sensible system for spatially attaching the large number of codes we were working with. The template we developed can be found in Appendix 1.

(3) Retrieving quotations is not possible in the same way as it is possible to retrieve text quotations from text documents. Simply the reference ID is retrieved for the quotation. This is still adequate for the purpose of searching, cross-referencing and retrieving whole images for comparison on the basis of particular characteristics - but it is a definite disadvantage over text documents. A capability for retrieving thumbnail images would go some way towards solving this as would some visual equivalent of the scrolling margin that shows the coding attached to text documents.

(4) Particular features of the software were generally annoying to use. For example, the way the code list appears on screen, requiring the user to scroll through a vast unstructured list. We learned to structure the list through careful choice of code words, but the software does not warn you that this will be necessary. The key strategy is to decide early on which overarching themes will emerge eventually as "families" in the analysis. These codes should be put into the code list first and others named accordingly.

(5) Atlas-ti offers a very flexible set of objects for both closed codes (dichotomous and multi-category) and the more open ended commentaries that we still needed to use for some complex areas, especially of visual meaning. Atlas-ti was superb in supporting our thinking in all these ways

(6) We found the search tool a little complex to understand, but in the end we found that we could do the multi-level searches we needed, using a combination of filters and families.

(7) We still felt the need to have a good off-line record of the images, their context in the paper, layout etc and devised an image report which gave an edited profile of the codings attached to each image.

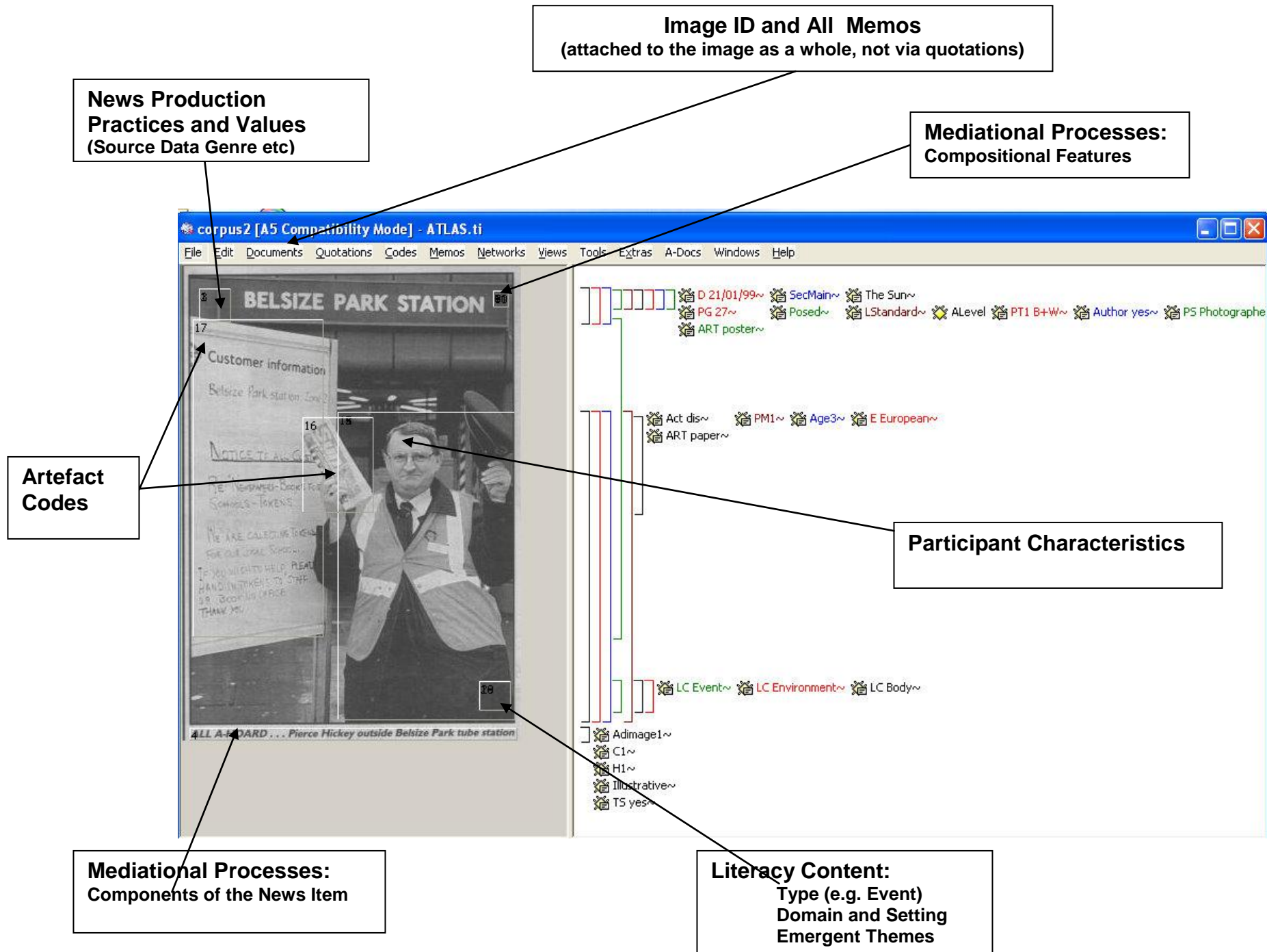
(8) The process of creating output reports from the software is rather clumsy and longwinded and a great deal of extraneous information prints out with the essentials. It was possible to do anything we wanted to do, but this often involved several steps of repetitive editing down (e.g. to create matrices, code lists, and the image reports), in conjunction with other software like EXCEL and WORD. Instructions are included in Appendix 2.

(9) Likewise, we found the visual network tool useful but we still amplified it by using other independent software (INSPIRATION). The interface between all these is fairly straightforward but the dream is for everything to be provided in one package!

(10) The basic statistical capabilities offered by Atlas-ti were fine for our purposes. It also supports qualitative comparisons among limited subsets of the data.

(11) An archive for the group discussion list would have been immensely helpful to us.

Appendix 1: Attaching Codes to On-line Images within Atlas-ti Example for S68



Appendix 2: Instructions for Creating a Matrix Table with Atlas and Excel

- **Decide what data sets you wish to interrogate e.g. Daily Mail and Artefacts.**
- **Filter the appropriate families from any of the four windows .
(Primary Documents, Quotations, Codes, Memos).**
N.B. These families may exist, but may need to be created before they can be used. (refer to Atlas manual if unsure about the creation of families.)
- **From the toolbar running along the top of the Atlas window select CODES /OUTPUT/CODES-PRIMARY-DOCUMENTS-TABLE.**
- **When prompted select the EDITOR choice from the OUTPUT dialog box.**
- **From the Editor window cut and the relevant data and paste it into word.**
- **Save as a TXT file.**
- **Open that TXT file into Excel.**
- **When you open the TXT file you should get a wizard prompt**
- **Step One, select the fixed width option from the original data type box**
- **Click on NEXT**
- **In the resulting dialog box check the data to make sure there is a vertical line in between each column of data. If there are omissions simply click the mouse cursor where a line is desired.**
- **Again click on NEXT.**
- **On the next dialog box simply click on FINISH.**
- **Save the resulting document as an Excel workbook**
- **Format the data to allow printing.**