

A MATTER OF COMMUNICATION IN THE 19TH CENTURY

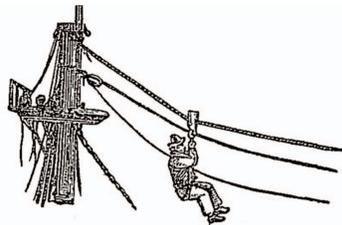
Communication I: What to do when the ship is wrecked?

On December 14th, 1830 the headline in the daily London newspaper »The Times« read: Dreadful Gale – Fatal Shipwrecks. A »tremendous storm« continued »for 30 hours«, its effects were the worst »in 30 years« and many seamen lost their lives.

As a maritime nation the U.K. was of course hit very hard by such events. In the 19th century one finds very dramatic illustrations in the newspapers, for example in the »Illustrated London News« (Oct. 11, 1851). These circumstances inspired the inventions of many life-saving devices. The purpose of all these inventions was to establish a connection – they called it »communication« –between the ship and the shore, in order to save the crew.

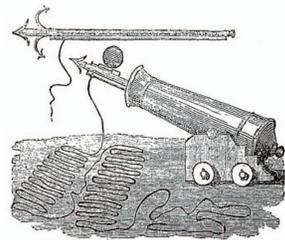


Inventors had to find ways of rescuing people who had been hit by a storm. One solution mentioned in the »Times« was Captain Manby's apparatus for preserving the lives of seamen, a device similar to something you might find in playgrounds today: a rope slide.



The idea is obvious. But how do you establish this connection, using a rope or similar device, in the first place? Amongst others there was one solution which was more like a »proper« invention: using an artificial force (for example, a gun or musket) to shoot an harpoon to which a line was attached. In this case there were only two alternatives: shooting from the ship to the shore or the other way round. For some unknown reason, one gets the impression that, once the connection is established, all other matters will be taken care of and the crew will be saved.

In Dingler's »Polytechnisches Journal« (1832, vol. 44) – two years after the aforementioned article – there is an article entitled: »Ueber Hrn. Murray's. Apparat zum Retten Schiffbruechiger« (Concerning Mr. Murray's Apparatus for Saving Shipwrecked Men). The theme here seems the same.



Since two years is a long time as far as technical developments are concerned – especially when we are talking about techniques meant to save human lives – it is obvious that the contribution taken from »Mechanics' Magazine«, 1832 does mention more promising techniques which had been developed in the meantime, for example an invention by Mr. John Murray.

Murray's apparatus is a new gun for establishing a connection. And as one can see on the illustration taken from »Illustrated London News«, apparatuses of these kinds were still in use 20 years later.

Communication II: Dingler puts it together

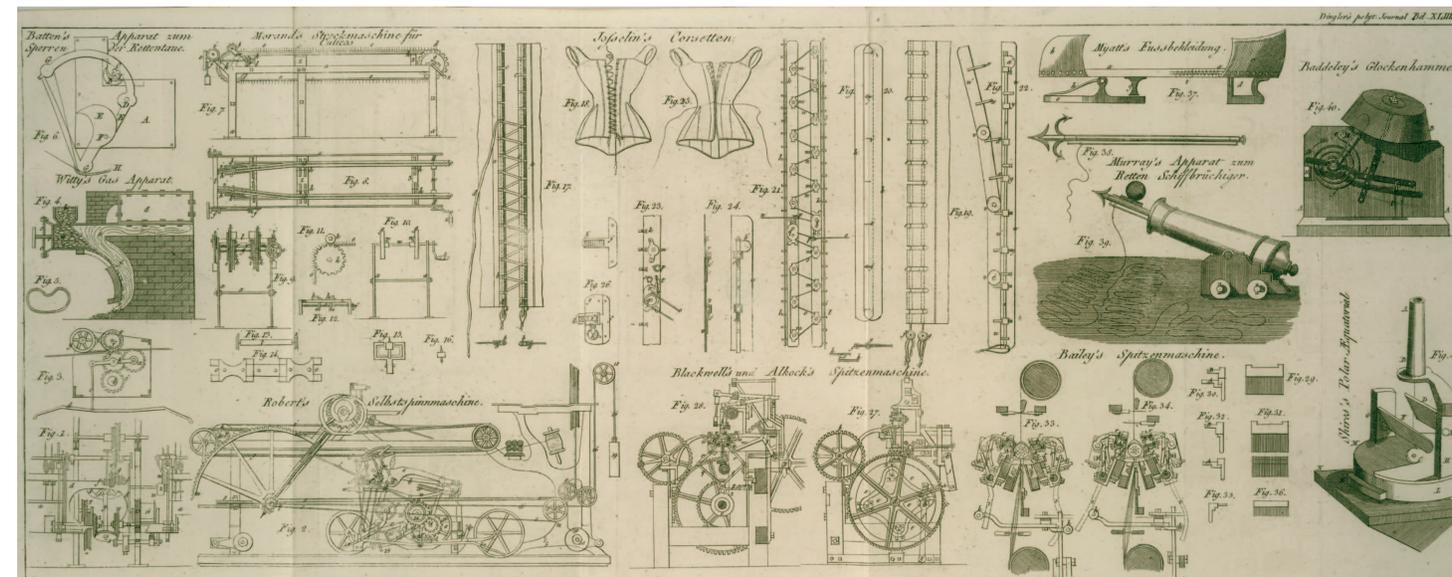
Communication in the general sense of linking distant points together is also an important topic in Dingler's journal. The editor of the »Polytechnisches Journal« linked extensively to related articles that had already been published in his journal. These links are something we can encode automatically by means of a perl-script, based mainly on regular expressions.

```
my $pat = qr/  
(?<:\s+)  
(?<:(?:\s+)?(?:(?:polyt[<-*>\s+]?  
journ(?:ale)?  
(?:</hi>)?  
[.])?\s+)  
)  
(?  
[B](?:an)?d?\.  
\s+  
(?:<hi\s+rendition="#roman\s+>?  
(?:[ivxlcdm]+) | (?:[1-9][0-9]?[0-9]?)  
)  
(?:</hi>)?  
[.])?  
(?:\s+ Heft \s+ [1-9] [.]?)?  
\s+  
S(?:ite)?\.\s+[1-9][0-9]?[0-9]?)  
(?!</ref>)  
)!is;
```

Each of these search&replace procedures result in a link to a certain page which can be anywhere in the journal.

```
u&#x0364;ber Murrays Apparat wurde im polyt. Journal  
<ref target="#pj044;#pj044_pb325">Bd. XLIV. S. 325</ref>  
schon berichtet
```

For this reason, the journal itself becomes a rich gathering of related nodes in a network of knowledge.



Dingler-Online | www.polytechnischesjournal.de

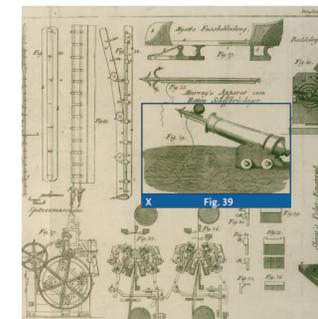
A Project of the Department for the History and Theory of Culture at Humboldt-Universität zu Berlin

Communication III: We are weaving a web

The editors of the journal adhered strictly to the media conventions of their time. In 1820 Dingler started using Gothic typescript for text, and copper engravings for the imprints. In later issues (starting in the 1870s) we find Antiqua letters and floating images, integrated within the text. As Dingler insisted on very detailed (and therefore expensive) lithographs rather than wood engravings (as used by »Mechanics' Magazine«, for example) right from the very start, we have made it our task not to veer from the standard set by him at this point.

Our aim is a re-interpretation of the relationship between text and images. Dingler completed each volume with technical drawings and visualizations on additional plates. The aforementioned invention by John Murray, for instance, can be found on plate 5 of vol. 44.

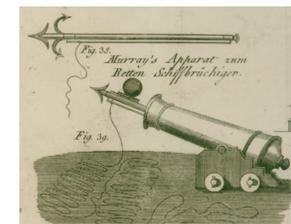
On these plates, up to 100 figures are encoded according to their specific coordinates using the Image Markup Tool developed by the University of Victoria. This tool can be used to mark up images and it stores the resulting data in conformant TEI files.



Einzelfiguren aus Tab. 5, Bd. 44
LXXIX. Verbesserungen an den Spinnmaschinen etc.
XCIII. Witty, Apparat zur Erzeugung des Kohleges
LXXXVI. [Apparat zum Sperren und Hemmen der Kettenstau.]
LXXVIII. Morand, verbesserte Spann- oder Streck-Maschine
LXXXII. Josselin, ueber die neuen Corsetten oder Schuerleibe
LXXX. Blackwell und Alcock, ueber Verfertigung der Bobbinet-Spizen
LXXXI. Bailey, ueber Verfertigung der Bobbinet-Spizen
LXXXIII. Myatt, ueber neue Fußbekleidung Fig. 37
LXXXVII. Murray's Apparat zum Retten Schiffbruechiger Fig. 38
Fig. 39
LXXXV. Drury's Glockenhammer Fig. 40
LXXV. Shires, Beschreibung eines neuen Polar-Aequatoriales

Finally we can access these plates from within the digitized articles. Because Dingler's plates include various illustrations that refer to different articles, we are working on giving the same caption to all figures that belong to the same article.

But the encoding of singular figures enables us as well, to access a scalable view of each figure using hyperlinks.



This approach has two immediate advantages: Firstly, it enables parallel reading of text and image and therefore adopts the original layout. Secondly, we can provide a new kind of readability. As we have already mentioned, the plates were densely packed with images. Highlighting them by moving the mouse over them will be much more convenient, enabling the reader to inspect them in more detail and thus enabling a wider integration of the text and images.

Summary

Our project is funded by the DFG (German Research Foundation) and is located at the Institut für Kulturwissenschaft, a department of Humboldt-Universität zu Berlin. Dingler's »Polytechnisches Journal« was published over a period of 111 years and has since become an important and widely known source for the history of knowledge, culture, and technology. We are digitalizing the journal as well as publishing it in full on the web. Access to Dingler-Online is absolutely free of charge.