Deciphering Livingstone’s 1871 Field Diary

Jonas Fossli Gjersø belongs to LSE’s Department of International History. He reports on how spectral analysis, which is essentially photographing the document with different light wavelengths to isolate the written text from the newsprint, was used to decipher explorer David Livingstone’s 1871 diary.

A year after the great African explorer Dr David Livingstone’s death in 1873, his friend Horace Waller published an edited version of his diaries.

In his introduction to “The Last Journals of David Livingstone, in Central Africa, from 1865 to his Death” Mr Waller remarks “Whilst in the Manyema country he ran out of note-books, ink, and pencils, and had to resort to shift which at first made it a very debateable point whether the most diligent attempt at deciphering would succeed after all.”

In fact, Mr Waller and his team transcribed only a third of his field diary written on the 24 November 1869 edition of The Standard newspaper.

Dr Livingstone had at this time resorted to using ink made from the pigment derived from the seeds of a local plant. Legibility was further reduced by the newspaper print over which Dr Livingstone had written at a 90-degree angle.

It was not until 2011 that this “very debatable point” would be resolved when a team comprised of among others Dr Keith Knox, Dr Adrian Wisnicki and Mr Michael Toth using spectral analysis was able to both suppress the newsprint and enhance the diary text, making the 1871 Field Diary legible for the first time in 140 years.
The importance of the transcribed document is enhanced by the fact that it contains Dr Livingstone’s original diary entries made during the infamous Nyangwe Massacre of 15 July 1871.

The slaughter of an estimated 400-500 local villagers by Arab slave traders exacerbated Britain’s anti slave-trade policy in East Africa and would have contributed to the Sir Bartle Frere Mission to Zanzibar of 1872, whereby Britain signed a new Anti-Slavery Treaty with the Sultan Barghash.

Accounts of the atrocities were passed to Henry Morton Stanley during his meeting with Dr Livingstone in Ujiji, but the original Field Diary, which was received with the explorer’s other documents in 1873, was illegible upon arrival.

Presenting the team’s findings at Birkbeck on 5 November 2011 Dr Wisnicki held that the newly transcribed diary renders Dr Livingstone as “more complex and not so uni-dimensional as portrayed in posthumous edited diaries.”

The diary suggests that witnessing the massacre horrified Dr Livingstone and that he afforded great importance to recording the atrocities for a global audience. Although he normally made daily entries, he changed to hourly reporting during this time.

The spectral imaging also reveals that he changed from using the plant pigment to his remaining supply of more permanent iron gall ink.
The team has published the diary together with the edited versions to enable scholars to compare the texts. The differences between them held Dr Wisnicki to be ‘astounding and almost completely different.’

The results of the spectral imaging of Dr Livingstone’s 1871 Field Diary and other details about the project can be accessed by any interested party from this link: http://livingstone.library.ucla.edu/1871diary/