

Review of: "Lake Bonneville and the Wasatch Fault – new theories and new paradigms yield insights into present day hazards in other regions of the world"

Edward Bromhead

Potential competing interests: No potential competing interests to declare.

I really enjoyed reading this article, although it is lengthy, and perhaps is better read by someone who knows the geography better than I do.

In essence, the argument is that the geomorphological features seen around a palaeo lake are best explained, not simply as climate-change related alterations in lake level, but by a range of other processes acting over a substantial period of time – substantial that is on a human scale, even if short on a conventional geological timescale. The processes include huge wave action due to fault movements, some landsliding, and volcanic eruptions with the deposit of ash and blocking of river courses. Rivers were diverted, and, of course, some of the seismicity was probably 'reservoir-induced'. Even with that lot going on, the role of climate changes still has some influence, as of course it must – but clearly (and convincingly argued), not to the exclusion of all else.

Wow! I was impressed. More to the point, I was convinced early in the article. After that, it was a question of wading through the detail.

As I read the article, I came across a few typo type errors. In one place there was 'draught' instead of 'drought'. Then, I came to '... rapid erosion or deposits or ...', where I wondered if the first 'or' might be 'of', or if 'deposits' should be 'deposition'. And, of course, 'Arther Conan Doyle' was really 'Arthur'. There are probably others.

One other thing that caught my eye was 'There are a lot of spits and bars ...' Hmmm. 'a lot' is singular. It did make me wonder about grammar all the way through. The article is written in the first person, and in the grammar of speech rather than the ossified, formal, prose of most scientific or engineering papers. I personally found it refreshing, and have come to believe that as most such papers are in the end simply matters of opinion, think we should have more, not less, of this approach.

As I approached the end of the article, I noted a definite change of pace. In Chapter 4, for instance, I started to see sub-section numbering coming in (e.g. 4.1.2) – different to what went before. I'm a big believer in some consistency in the structure of Chapters, Sections and so on. I would have liked more sections in what went before and fewer subsections at the end, but it is the Author's prerogative.

Also as I approached the end, I did begin to wonder what the impacts on humanity might be. Some of that business was discussed at the end of the article.

All in all, a very convincing account, even if presented in a colloquial style – an odd combination with an extensive list of references presented in a more traditional way. But, in my view, a well-argued and persuasive account.