

Focus and Context - Visualization without the Complexity

Jens Krüger, Thomas Fogal

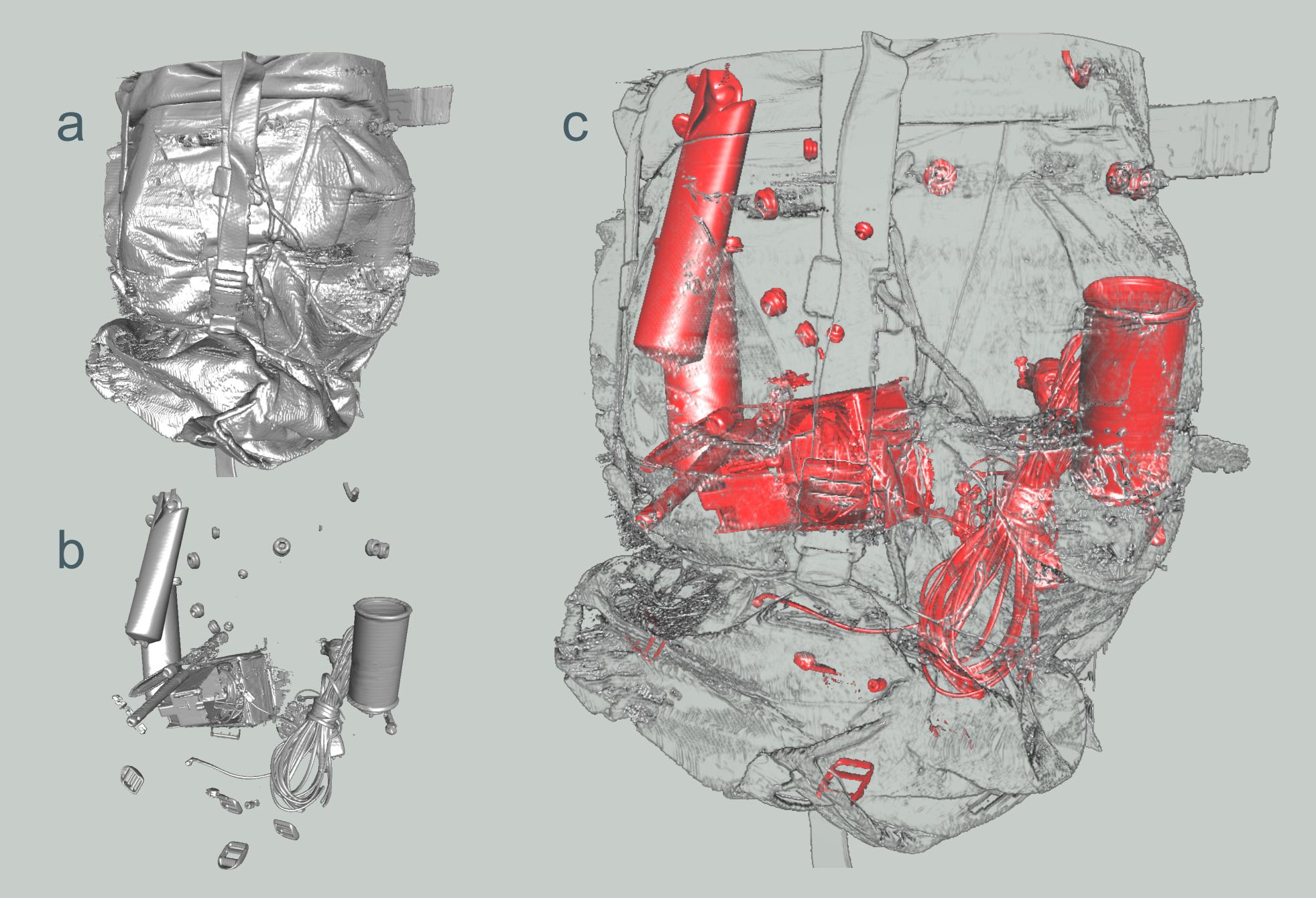


ClearView

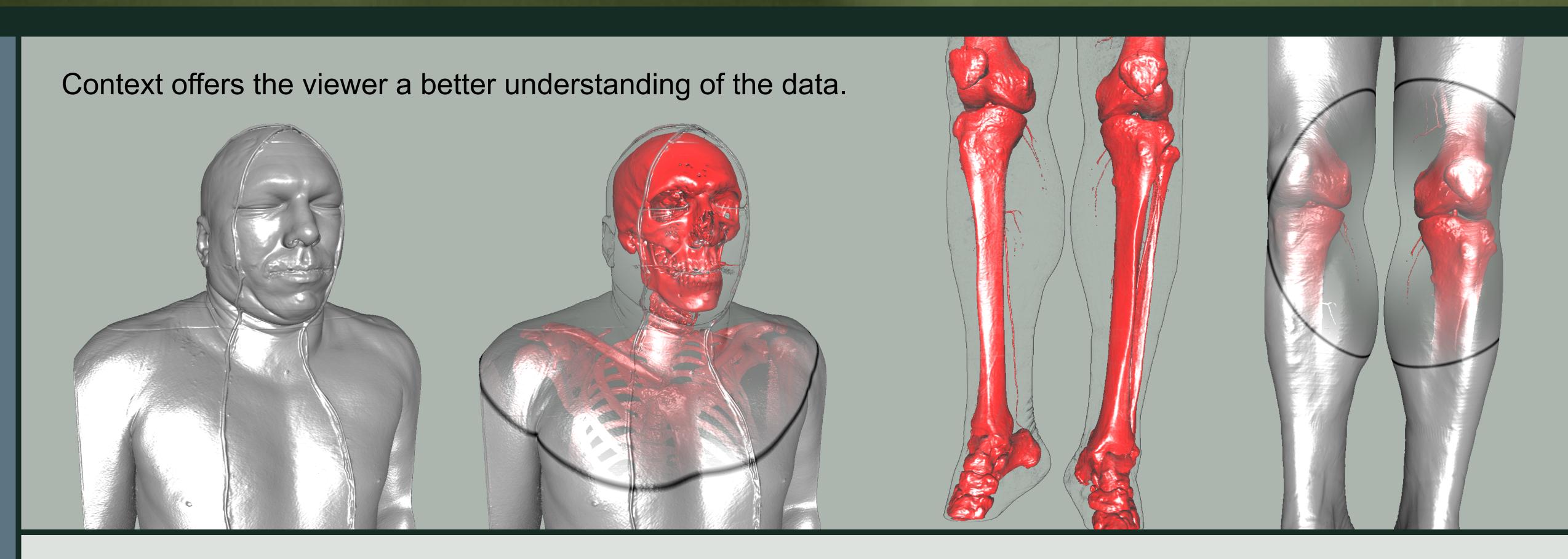
As data sizes grow, the amount of information resident in those data grows proportionally. Visualizations of these large datasets are correspondingly dense in their complexity, causing the viewer to be lost in a sea of data. This can cause important features to be drowned out by surrounding data, causing the viewer to focus on aspects of the data which are relatively unimportant.

'ClearView' is a reaction to the complexities of the images generated by modern volume rendering tools. It was designed to follow the 'Focus and Context' model of visualization, in which we focus our attention on an area of interest while maintaining the relevant context of spatially related data. The result is a very simple tool which users can grasp, manipulate, and use to understand their data quickly and easily.

Images are generated based on the ClearView lens, which the user moves through the dataset to look inside at values of interest. Even though context information is dissolved to allow viewing inner portions of the dataset, small scale structures of the context data are preserved to allow one to easily infer the relationship between the 'focus' data and 'context' data.



Here we see a ct scan of a stuffed backpack (a), however, we cannot look inside. In (b) we have isolated the objects within, but at the loss of contextual information. Using ClearView shows both focus and context (c).



When it comes to computational expense, ClearView saves the bank.

