
Creativity in the paleobiology laboratory: why fossil preparators compare themselves to Michelangelo

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Abstract

Session: Working in biology: how laboratory and field practices shape biological knowledge (Nicole Nelson, Jesse Olszynko-Gryn, Kristoffer Whitney, Caitlin Wylie) Laboratory work is the foundation of most biological research. This is an interpretation rather than a fact, as many researchers – scientists and social scientists alike – might argue that the field – nature – is the basis of biology. However, even specimens collected in the field must pass through the lab before being analyzed and, eventually, becoming the evidence for knowledge claims. Fossil specimens, for example, undergo extensive preparation involving rock removal, damage repair, and reconstruction of missing parts. Technicians called preparators choose, apply, and sometimes invent these techniques in paleobiology laboratories. During interviews and participant observation, preparators regularly describe their work as artistic and creative. One preparator said, "[Preparation] is like the same thing that Michelangelo said when he sculpted *David*... that he's revealing it out of the rock". This portrayal perhaps serves to defy the common conception of technical work as protocol-based and predictable. Revealingly, preparators discourage creativity among volunteer preparators, who are expected to follow directions rather than choose or design preparation methods. Preparators and their work are typically absent from research publications, making them "invisible technicians" in Steven Shapin's sense. This invisibility can imply that their work is too simple – or too black-boxed – to require explanation or justification. I investigate why these "invisible" preparators claim art and creativity as necessary to their work, and thus how researchers, technicians, and volunteers construct scientific practice and social order in today's biology laboratories.

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