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Lichtenberg on "Geological Fantasies," a reconsideration

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In a characteristically witty essay on "Geological Fantasies", the physicist and aphorist Georg Christoph Lichtenberg took aim at theories of the earth's origin, such as they were, at the close of the eighteenth century. The subject was profoundly important, he noted, and not just for the history of the earth, but for the history of the mind: "It is unbelievable what revolutions of the earth have done for revolutions of the mind. Just as one finds sea creatures on mountain peaks in the former, without trace of a sea far and wide, so one finds in the latter, with astonishment, conclusions without trace of a sure premise so far as the eye can see" (Lichtenberg, 1795). Less pointed versions of his observations are the standard fare of histories of geology, where free-wheeling speculation gives way to the calm observations and principles of a science. Yet there is more going on in Lichtenberg. Goethe observed that "Lichtenberg's writings can serve as the most marvellous divining rod: where he makes a joke, a problem lies hidden" (Goethe, 1988). Indeed, Lichtenberg hoped that careful observers such as de Luc and De Saussure, who spent years climbing mountains, and others such as Werner and von Trebra, who spent much time in mines, might find a way to draw their experiences into a complete theory of the earth. But the "spirit of observation", he noted, did not always lend itself to a sense of making connections and creating a whole. Lichtenberg showed considerable insight into the challenges of doing geology in a revolutionary age, and his reflections are apt for our own era, in which the geosciences are deeply tied up with the extractive industries and, at the same time, offer rich accounts of the earth's history and dynamics.

Lichtenberg, G. C., (1795). "Geologische Fantasien (Franklins Geogenie)." Göttinger Taschen Calender für das Jahr 1795, p. 79-108.

Goethe, J. W. von. (1988). Maximen und Reflexionen. In: Goethe, *Werke, Hamburger Ausgabe*, vol. 12. Deutscher Taschenbuch Verlag, Munich, p. 365-547.