

now instrumental in forming similar deposits. But there is not so great a unanimity of opinion concerning the second statement, for it has been maintained that no such intervals have occurred; but that strata have been occasionally disturbed by forces equal and similar to the volcanic force of the present day, and that a series of these produced mountains.

Mr. Lyell is one of those who differ from M. Beaumont on this subject, but the terms of his objection do not appear to us so sound as might be expected from a geologist of so much acuteness and research. "The geologist," he says, "who assumes that continents and mountain chains have been heaved up suddenly by paroxysmal violence, may be considered as pledging himself to the opinion that the accumulated effects of ordinary volcanic forces could never, in any series of years, produce appearances such as we witness in the earth's crust. Time, and the progress of science, can only decide whether such an assumption is warranted, or whether, on the contrary, it does not spring from two sources of prejudice; first, the difficulty of conceiving the aggregate results of a great number of minor convulsions; secondly, the habit of viewing geological phenomena without any desire to explain them as the effects of moderate forces, such as we know to act, instead of that intense degree of energy, the occasional development of which, however possible, is entirely conjectural."

There are many geologists who have confessed their conviction that the volcanic force, as exhibited in its effects at the present time, could not have produced such appearances as we discover in the earth's crust; and by so doing they pledge themselves to hold that opinion until they are convinced that it is erroneous. If their opinion be founded on an assumption, it cannot be more violent than that admitted by Mr. Lyell, and those who agree with him. But Mr. Lyell attempts to account for the opinions of those who have upon this subject arrived at a conclusion opposed to his own. As one reason, he states, that we have "the habit of viewing geological phenomena, without any *desire* to explain them as the effects of moderate forces, such as we know to act." If this be the cause of our peculiar opinions in this matter, it is a better evidence of their accuracy than of their falsehood; and if Mr. Lyell and his followers desired to come to the conclusion they hold, we are not surprised that they have ob-