

THE  
PHILOSOPHICAL REVIEW.

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ON COSMIC REVERSIBILITY.

THE idea of the reversibility of part or all of reality is not a new one. Often it has been the mere play of the speculative imagination; sometimes it has been (or at least the possibility of it has been) an important underlying issue in determining the framework of a system of thought. Perhaps, therefore, the best way to estimate the present importance of the problem would be to notice a few of these earlier historical appearances.

In the logic of Aristotle the whole criticism of hypothetical reasoning rests upon the implied doctrine of the plurality of causes. It is valid to argue by 'affirming the antecedent' simply because it is assumed that from a given cause there can be but one effect. It is invalid to 'affirm the consequent' (as a premise) for the explicit reason that the same effect might have resulted from an indefinite and unknown number of causes. In other words, scientific reasoning must move in the forward direction; from an exhaustive knowledge of the cause we may deduce the necessary effect, while in face of an exhaustive knowledge of the effect the cause would remain indeterminate. Probably Aristotle's doctrine of the four types of causality had something to do with this outcome. The entelechy, at least, was not a reversible thing. Final causes necessarily have a definite 'look' in time and one could no more reverse the process than, having looked at the sun with his eyes, a man might imagine the process reversed so that the visual sensation caused the light of the sun. Formal and material causes, as Aristotle defined them, have no