My aim in this paper is to make a fairly close study of the conceptual structure of Hegel's *Physik*, the second, most difficult section of his *Naturphilosophie*. I do so for two reasons. The first is part of the general effort to plumb the nature of the Dialectic, as Hegel conceived it, the method of steady advance from one thought-determination to another, the latter being regarded as a more adequate vehicle of interpretation and understanding than the former, since it incorporates the thought-content of the former yet adds to this comments and criticisms which make it part of a more completely understood and self-consistent whole than it would be formerly. For Hegel, the Truth is the Whole, and we only achieve it by a process in which the one-sided partiality of our notions is overcome by seeing them in a context which includes other, perhaps even superficially incompatible, notions. This unique thought-method has been extensively studied in the case of the *Phenomenology of Spirit* and the two versions of the *Logic*: it has also been studied in the Philosophy of History, the History of Philosophy, the Philosophy of Religion and other concrete forms of the Philosophy of Spirit. But no careful study of the Dialectic in the Philosophy of Nature has been recently attempted, possibly owing to fear aroused by the wealth of scientific difficulty in that work. The difficulty of the material has been much over-estimated; much of it falls within the bounds of ordinary school-science, and it is interesting material dialectically since it studies the Idea in its utmost remoteness or alienation from self, in its breakdown into items which, superficially regarded, seem mere matters of contingent experience and which moreover often seem as near mutual independence and irrelevance as it is possible for thought-material to be. Such material, by its stark alienness, shows the working of Hegel's thought-mechanisms with more perspicuity than *geisteswissenschaftliche* material.

---

1 The quotations from Hegel's *Naturphilosophie* in this paper are from A. V. Miller's recent translation (Clarendon Press, Oxford, 1970).
such as Stoicism, the French Revolution or Cartesian Philosophy, and if Hegel's methods can be shown to have purchase and illumination in this unpromising region their philosophical merit will be well attested.

I am also studying this part of Hegel's work for its intrinsic interest. There are two basic ways of regarding Nature, one Cartesian, which sees the superstructures of purpose, life, consciousness as more or less irrelevantly imposed on an order of things which has nothing teleological, organic or conscious about it: the other Platonic and Aristotelian, which sees the substructures of bodily mechanism and inorganic existence as in some way serving the organic structures which emerge out of them, and as teleologically geared to produce the latter. The former epiphenomenalistic view has been tried long without achieving conspicuous success: it has never shown that the classical approach is not after all the more explanatory. Hegel's Philosophy of Nature is in my view the best Nature-philosophy of the classical type. If unacceptable or outmoded in detail, it may yet be a type of thought that quite well permits of successful modernization.

There are certain basic misunderstandings regarding Hegel's Nature-philosophy which must be removed at the outset. Hegel's Nature-philosophy, despite much concrete detail, does not purport to deduce, in the strict formal sense of "deduce," the empirical facts of Nature, nor is it even concerned with them in all their detail. It accepts the existence of a vast amount of natural detail of which no philosophical treatment is either possible or desirable, the number of species of tropical parrots, the shape of the ear-lobes, etc. There is in Nature and Mental Life a purely contingent element that gives these spheres their final concreteness: things could in such respects have been otherwise and it is philosophically inept to try to show that they could not have been so. It is in the welter of such details that what Hegel calls an "instinct of reason" directs the man of science to find a law, a specific pattern, a Begriff or notion, and it is on the conceptually transformed material of the man of science that the philosopher must go to work, using his own instinct of reason, and discovering in scientific concepts the more general, and also more deeply unitive concepts that are properly philosophical. For the philosopher, e.g., Light and Gravitation are both cases of the same actio in distans, the same collusive unity of the remote, which is philosophically interesting. There is no case in Hegel where a philosophical interpretation of Nature is not scientifically documented: Hegel sometimes sides with one scientific view rather than another, but he is never without scientific backing. And if he backs the wrong horse, as when he said there could only be seven planets in his Jena