

composition from organic chemistry, through the actual successes of the laboratory in new syntheses; . and the final recognition, based upon understanding of the principle of the conservation of energy, that, whatever else "vital force" may be, it is certainly not *force*, — a form of energy. Thus limited, vitalism has been obliged to take refuge in a more restricted belief; namely, that the organism is somehow governed by a directive tendency which, like an architect, presides over its development; but that meanwhile the manifold processes of life and evolution go on within the world of physical science just as the work of the builder conforms to the laws of mechanics, though following the plan of the architect.

This view has been well stated by another great Frenchman, Claude Bernard: "Life is the directive idea or evolutive force of the being; . . . but it would be an error to believe that this metaphysical force operates after the manner of a physical force. . . . The metaphysical evolutive force by which we may characterize life is useless to science, because, existing apart from physical forces, it can exercise no influence upon them. Hence we must here separate the world of metaphysics from the world of positive phenomena