

assisted by the other, will know how to assign the parts, and to estimate the prerogatives of both.

12. When the mind has retired from direct converse with the external world, and brought to its own inner chamber of thought the materials which it has collected there, it then delivers itself up to its own processes—first ascending analytically from observed phenomena to principles, and then descending synthetically from principles to yet unobserved phenomena. We cannot but recognise it as an exquisite adaptation between the subjective and the objective, between the mental and the material systems—that the results of the abstract intellectual process and the realities of external nature should so strikingly harmonize.\* It is ex-

\* There are some fine remarks by Sir John Herschel, in his preliminary discourse on the study of Natural Philosophy, on this adaptation of the abstract ideas to the concrete realities, of the discoveries made in the region of pure thought to the facts and phenomena of actual nature—as when the properties of conic sections, demonstrated by a laborious analysis, remained inapplicable till they came to be embodied in the real masses and movements of astronomy.

“These marvellous computations might almost seem to have been devised on purpose to show how closely the extremes of speculative refinement and practical utility can be brought to approximate.”—*Herschel's Discourse*, p. 28.

“They show how large a part pure reason has to perform in the examination of nature, and how implicit our reliance ought to be on that powerful and methodical system of rules and processes, which constitute the modern mathematical analysis, in