

F. Y. Edgeworth's *Mathematical Psychics* and His Utilitarianism : The Derivation from the 'Sidgwick-Barratt Controversy'

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The purpose of this article is to demonstrate that Edgeworth's *Mathematical Psychics* (1881) has been influenced by various intellectual contemporaries through the 'Sidgwick-Barratt Controversy,' which concerned not only the adoption of physical methods to ethics but also the question of what is the first principle of the conduct. In this controversy, Barratt admitted the physical methods of ethics, but Sidgwick rejected them; and also, while Sidgwick arrived at the 'Dualism of Practical Reason,' the conflict between egoism and utilitarianism, Barratt insisted the former was the only principle.

Edgeworth admitted the physical methods of ethics under the influence of Barratt beginning with the publication of *New and Old Methods of Ethics* (1877), at least up to *Mathematical Psychics*; which is clear from his adoption of the 'Fechner's Law' to measure the quantity of pleasure.

In *Mathematical Psychics*, through the analysis of the contract between egoistic agents, Edgeworth attempted to prove the limits of adopting egoism and its need of utilitarianism as the solution to the 'Dualism

of Practical Reason'; this endeavor is opposite to Sidgwick as well as Barratt, and it cannot be completed without reference to Jevons' economics.

Though Edgeworth justified the utilitarianism, he criticized 'equality' tacitly implied in it. Edgeworth believed that the capacity for pleasure/work is roughly different among the different classes (people who generally tend to inherit the superior capacities belong to the higher), and also that those capable of pleasure should have more means and more pleasure. According to such ideas, unequal distribution is admitted as the 'distributive justice' for the greatest happiness of the society. Edgeworth called his utilitarianism 'exact Utilitarianism,' and it was critical not only of Benthamism but also Sidgwick who accepted Bentham's formula.

Thus, Edgeworth's *Mathematical Psychics* is not only the economic but also ethical work influenced especially by the 'Sidgwick-Barratt Controversy.'

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