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【85】 Joseph Fourier and Sadi Carnot: a counterpoint in the 19th century study of heat

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Taking opportunity of this year's celebration of the 250th anniversary of Joseph Fourier, I analyse his approach to the study of heat exposed in his celebrated treatise *Théorie analytique de la chaleur* (1822). In a way of counterpoint, I take as comparison the renowned memoir of Sadi Carnot, *Réflexions sur la puissance motrice du feu* published almost simultaneously in 1824. Both bring a major innovation in the study of heat concentrating on its effects rather than on its ultimate nature. But their aims are radically different in what concerns the heat phenomena considered. Both treatises will deeply change the physical sciences: Fourier's will become a model for all subsequent work in mathematical physics and a major source of mathematical innovation while Carnot's will pave the way to the foundation of Thermodynamics.

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