



LOW DOSE, BIG WONDER: PAOLO MANTEGAZZA'S DISCOVERY OF THE 'NERVE NUTRIENT' COCA

Wahrig, Bettina

Beethovenstr.55

D-38114 BRAUNSCHWEIG

GERMANY

When the physician, adventurer and politician Paolo Mantegazza (1831-1910) journeyed to Southern America, he reported his observations (both of social and natural phenomena) home in letters, which were published later on. After returning to Europe, he toured through learned societies and reported on his observations.

Among the more spectacular issues, there was his report on the Coca plant. Although the plant had been known since the first decade of the colonisation of the New World, knowledge of its chemical structure was not yet available when Mantegazza first reported on it in 1858. Albert Nieman isolated the alcaloid in 1860.

Mategazza's focus was the use of Coca as a means to enhance bodily and mental fitness. He regarded Coca as a "nerve nutrient", using a term coined by Justus Liebig. As such, it belonged to those - precarious - substances that would have a considerable effect even in a small dosis, and could be highly beneficial, but also highly dangerous.

When considering its use by the indigenous population, Mantegazza criticized the working conditions of the mine workers under the regime of colonialism. On the other hand, he stated that only with respect to the European mind, and especially the male European mind, the beneficial effects of the plant would outweigh Coca's possible detrimental effects. His hypotheses on the physiological effects of the substance were based both on observations and on experiments. The latter took up the newly developed pattern of reaction-time experiments. Hence, Mantegazza's research on Coca is an early example of the emerging psychopharmacology. The paper will explore Mantegazza's experiments and experiences under the triple perspective of colonialism, pharmacology and experimentalism.