

Repetitions and Differences:
Psychophysiological Time Machines,
1850–1865¹

Experiments are machines: not stable mechanisms that transfer, by means of their movable parts, concentrated force; not closed boxes that transform inputs into outputs; and above all not algorithms, that is, formal instructions for operating systems. Experiments are machines in the sense of Deleuze and Guattari, that is, spatially circumscribed and temporally limited installations that combine heterogeneous elements in order to create economic effects in the most general sense. In the nineteenth century life sciences, frog muscles and blood cells, kymographs, centrifuges and microscopes, gas and water motors, laboratory servants, institute mechanics and scientific directors as well as assistants cooperated to bring about intensities that could be perceived as epistemic and/or aesthetic phenomena. Thus, laboratories for physiology, psychology etc. appeared as factory-like plants where bodily functions of animals and human beings were investigated systematically. With Deleuze and Guattari, however, one may underscore the fact that the assemblages functioning in these plants display marked differences with respect to the material means supporting industrial labour.²

First of all, machines of research never work smoothly or without frictions. On the contrary, disturbances, dissonances, and resistances constitute an integral part of their functioning. In many cases, the epistemic potential of these machines is connected to such sources of error. For example, late nineteenth century physiologists discovered that animals often react in nervous ways when confronted with laboratory environments. At first glance, these reactions simply seemed to impair the precision of physiological measurements. Eventually, however, they

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² The most instructive text in this respect is Gilles Deleuze and Félix Guattari, Balance sheet: program for desiring machines. *Semiotext(e)* 2/3 (1977): 117–135. See also H. Schmidgen, *Das Unbewusste der Maschinen: Konzeptionen des Psychischen bei Guattari, Deleuze und Lacan* (Munich: Fink, 1997).