

## Rezensionen

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**Nikolas Rose, Joelle M. Abi-Rached, *Neuro: The New Brain Sciences and the Management of the Mind*, Princeton, New Jersey: Princeton University Press 2013. 352 pp., \$ 24,95. ISBN 978-0-691-14961-5.**

Over the past circa 25 years, the neurosciences have been exceptionally successful in exporting their thought-style and visionary appeal from the laboratory to all sorts of public domains – from the clinic to the classroom, from courts and prisons to the pinnacles of politics. Not least, the academy itself has shown a rapturous affinity to brainy matters, evidenced by the rapid blossoming of a large number of neuro-prefixed disciplines such as neuroeconomics, neurolaw, neuroaesthetics or neurotheology. Fitting, in light of this, the name-it-all prefix as a title for what is set to become a landmark socio-historical assessment of this formation: *Neuro*. Equally fitting, its authors: Nikolas Rose, acclaimed British sociologist of the biomedical sciences and long-time leader of the prolific BIOS center at the London School of Economics, now head of Sociology at King's College, London, and Harvard-based history of science PhD-candidate Joelle M. Abi-Rached, known to experts for an insightful paper on the “Birth of the neuromolecular gaze” (2010). Rose in particular is uniquely predestined to write a book like this. Working broadly in the genealogy/history of the present tradition of Foucault, Rose has deservedly won praise for charting the emergence of the psy-disciplines in the 20<sup>th</sup> century and self-management techniques, subsequently shifting towards biomedicine with an impressive work on the emergence of new biomedical thought- and life-styles (*The Politics of Life Itself*, Princeton, New Jersey: Princeton University Press 2007). A book on the expanding socio-cultural position of neuroscience thus fits quite naturally into this lineage. While *Neuro* is by no means a mere sequel to Rose's previous work, it insightfully aligns several key aspects of the emergence of the Neuro formation with both the psy-complex and the many marked shifts in the biomedical sector and in biopolitical formations of the present. Without making much fuss about it, the authors plausibly indicate how neuroscience has come to inhabit the cultural niche carved out by the psychological disciplines in the second half of the 20<sup>th</sup> century. Relatedly, they sketch how regimes of medical screening and various techniques of soma-related

self-management intermingle productively with the emerging neuro episteme.

The book lives up to the expectations. With sovereign ease, Rose and Abi-Rached keep clear of two notorious traps many writers in the social and human sciences have fallen into in dealing with neuronal matters: harsh but largely uninformed criticism unfolding within the reflex-currents of traditional humanism and leftist politics on the one hand, or uncritical – and often equally uninformed – embrace by self-declared neuro-enthusiasts on the other. What strikes one when reading *Neuro* is how well the authors know what they are writing about. Their strategy is one of informed, balanced assessment, carefully weighing promises against perils, methodological conundrums against technical breakthroughs, genuine insights against promissory overclaim – all against a well-researched background of historical developments, institutional and personal entanglements, discursive surroundings, and political and institutional pressures. A whopping 40 pages of written-out endnotes provide a wealth of valuable details to support the main text. The substance of the book consists of a combination of historical studies of the emergences of today's major neuroscientific lines of research and methodologies combined with sober assessments of the scientific status quo and its technical and conceptual limitations, and a socio-cultural situating of the emergent neuromolecular style of thought, as it begins to spread through various areas of advanced Western societies (notably, the clinic, social policy, education, and even the law). An additional layer is the broadly ‘neuro-philosophical’ discourse that is loudly proclaimed by eminent neuroscientists in their popular writings and by a growing number of philosophers, journalists and science writers that have jumped on the bandwagon.

The first chapter sets the stage by charting the emergence of the neuromolecular style of thought in the 1960s, providing the structural marker that sets the neuro complex apart from other epistemic formations. Importantly, from roughly the 1990s onward, the canonical neuromolecular vision has been complicated by the discovery of

neuroplasticity, which has forced researchers to acknowledge the crucial formative role of environmental influences on brain development. The authors consider this a sea change – not least because ‘plasticity’ has very much deflated earlier reductive fantasies of a ‘hard wired’ central organ. The second chapter gives the obligatory assessment of neuroscience’s culture of visualization – from early staining techniques in neuroanatomy to the latest trends in brain imaging, including helpful discussions of the many limitations of the fMRI technology. Animal models – pervasive in the field but rarely discussed by commentators from outside the disciplinary core – are thoroughly dissected and exposed in their limitations in the brilliant chapter 3, while chapter 4 provides more of a standard tale of the neurological promises turned mostly disappointments in biological psychiatry. In chapter 5, the authors turn to the discursive formation now increasingly at the forefront of the Neuro universe: the ‘social brain’. With the discovery of those notorious ‘mirror neurons’, and with research focusing on empathy and social cognition, neuroscience seems to dismantle and replace the self-interested individualist championed by former generations of naturalists since Darwin, and reveal a brain wired for connection. Here is a message of hope – man as a ‘social animal’ – and surprising avenues seem to open up for cooperation between neuroscientists and social scientists on the foundations of human sociality, and even a far-reaching policy re-orientation seems in the works: education and social policy now counting on the eminently social organ within each of us. Some more resolute distancing from this uncannily shallow ‘third culture’ lore would have been in order (on that more below). After a well-informed chapter 6 on the vicissitudes of the ‘criminal brain’ and on ‘neurolaw’, the authors finally turn to ‘personhood in a neurobiological age’ (chapter 7). Only briefly the chapter explores some of the philosophical narratives surrounding the Neuro formation, where self-declared ‘neurophilosophers’ – the likes of Patricia Churchland and Thomas Metzinger – join the chorus of the philosophically minded among neuroscientists to lay out their ideas on themes like selfhood, free will and reality as neural fiction. While the mild neutrality that Rose and Abi-Rached display here can be somewhat irritating in view of the many conceptual confusions and manifest inconsistencies in this literature, the chief move of this final chapter is persuasive. What is really going on, the authors argue, is not so much a philosophical dismantling of the enlightenment self as its moderate expansion towards a novel assortment of self-management techniques, new forms of science-informed

self-fashioning supported by many subtle shifts in language, technology, and judgment arising in all sorts of mundane settings, in all kinds of small ways informed by the neurosciences (i.e. through themes such as neural plasticity, or techniques such as mindfulness training, ‘brain gyms’ and so on). The shift in subjectivity is neither so radical as often proclaimed, nor in the first instance a matter of philosophy – rather, it is a continuation, on partly novel terrain, of trends towards a ‘somatic individuality’ and corporeal ethics that have been with us for quite a while. Apparently, Rose gives us a dose of his familiar medicine, and he seems very much on the right track with it.

To readers favoring a more robustly critical drive in social assessments of a hegemonic scientific discipline, the book, despite its countless critical insights, can be somewhat disconcerting. As Rose and Abi-Rached state repeatedly, they have grown weary of the ‘usual reflexes’ of humanists and social scientists, and write instead in a “spirit of critical friendship” (p. 3) with neuroscientists, looking for rapprochement instead of confrontation. They surely make an important point by distancing themselves from the routine diagnosis of ‘neuro reductionism’. Those days are indeed over, as very little work in neuroscience today deserves this label. In fact, the ‘personal’, psychological level of description is so alive and well in much current neuroscience that this can be annoying to readers harboring postmodern scruples about subjectivity and ‘mental states’: Good old eliminative materialists, where have you gone? But does this one correct point about the decline of reductive and eliminative positions warrant an encompassing restraint on many other channels of critique as well? There is an obvious mismatch, in several chapters, between the robustly critical insights brought out in the concrete analyses, and the rather moderate, open-ended and indeterminate conclusions, both to single chapters and to the book overall.

Do the authors exercise their restraint deliberately in face of what could as well be deemed a quite devastating situation? As they themselves have shown in many places in the book, neuroscience has not made good on many of its promises, and despite all those massive investments into the research infrastructure, in many areas things are not likely to look much better in the future. For example, we have not seen, and are not likely to see anytime soon the often announced wave of novel neuropharmacological substances effective in curing mental illness; neuropsychiatric diagnosis on the basis of individual brain scans is as far away today as it was 20 years ago; the limits to extrapolation from results achieved in animal

models are staggering; not to mention the many vigorous critiques revealing methodological flaws in the standard practice of fMRI research. Moreover, as the authors hint at as well, what is the 'philosophical content' of the alleged Neuro revolution really more than a mixture of worn-out 19<sup>th</sup> century naturalistic lore, of rather one-sided speculation not backed by actual findings and of overly optimistic statements as to the 'obviousness' of the mind's emergence from the brain – in the complete absence of any conclusive new argument as to why the metaphysical riddle of the 'explanatory gap' should have somehow narrowed in recent years?

While the authors' conspicuous restraint in the presence of enough critical material might be preferable to its opposite – i. e. basing far-reaching conclusions on shallow analysis – it leaves the reader with a strange feeling. An atmosphere of inauthenticity besets several passages of the book. While neuroscientists are for the most part protected like cheeky but lovable children, humanists and social scientists are repeatedly reminded of their backwardness. Maybe the restraint is in part due to the fact that Nikolas Rose has long positioned himself as the leading social scientist not just

of but also within neuroscience – freshly evidenced by his role on the steering committee of the Social and Ethical Division of the massive EU-funded Human Brain Project. Be that as it may – what we can say is that *Neuro* is a must read for all scholars in the field of historical, social, cultural and ethical studies of neuroscience. No critical assessment of neuroscience worth its salt may from now on operate below the high bar this book has set. But others should not let neuroscience off the hook as easily. Money is burned on a massive scale that is quite likely invested better elsewhere. It is not just an open question, but still highly doubtful indeed whether the humanities and social sciences will ever robustly benefit from interdisciplinary cooperation with experimental neuroscientists. What is brought forth as the 'neurophilosophy' of our time is for the most part conceptually flawed, politically backward, and so little grounded in actual research findings that it borders on embarrassing. And, quite honestly, aren't most 'third culture' ideas simply bunk? Critical friendship or no, sometimes a solid kick in the butt could well be the better medicine.

Jan Slaby (Berlin)