Laudatio Paul Eling

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It is a great pleasure to introduce Paul Eling. The last time I saw Paul was about ten years ago, when he was an examiner of my doctoral thesis. I am glad to welcome him today under (at least for me) rather less stressful circumstances. Paul obtained his PhD in 1983 at what was then called the KU Nijmegen on a dissertation about laterality, a topic he was already interested in as a student at the same university. He was then appointed for two years as a researcher at the Max Planck Institute for Psycholinguistics on a project about aphasia. Since 1985 he is appointed as professor in neuropsychology at the Radboud University Nijmegen, and conducts research in a domain that has received a great deal of attention in recent years, namely the relation between brain and behavior. More specifically, his research focuses on the biological basis of attention and learning. He has published dozens of papers on this topic in scientific journals and he has supervised numerous PhD students.

But a second strand of Paul's research, and the reason why he is awarded the Sarton medal today, is his contribution to the documentation and analysis of the history of neuroscience, a topic on which he has also published dozens of papers. There are two major themes in this work. The first theme is the history of neuroscience in The Netherlands and the contributions of several key figures, such as Jacobus Schroeder van der Kolk, a contemporary of F. C. Donders. The second theme is the history of aphasiology; here Paul asks for example what Paul Broca and Carl Wernicke *really* said, and how their views fit in their historical context.

What is so interesting about this work? I will mention two aspects. First, as I said, the last two decades have shown an enormous increase in interest in

studies on the relation between brain and behavior. This is true for Academia, where the cognitive neurosciences have grown explosively, but also for the outside world. Indeed, it is difficult nowadays to open the science section of a quality newspaper, without being confronted with (sometimes nicely colored) pictures that show brain activity while a person is engaging in a certain behavior. To illustrate this, I conducted a search of the digital archive of *NRC Handelsblad* with keywords like "brain activity", "brain scan", and "fMRI". This yielded dozens of hits, such as "male brain responds strongly to contempt", "brain punishes abnormal judgment", and "Chinaman calculates with different part of brain than Westerner". It is perhaps not surprising that such strong statements evoke a response. The American philosopher Jerry Fodor sighs in the *London Review of Books* "*why, why does everyone go on so about the brain?*" Others speak unkindly about "chromophrenology".

Although such comments often miss the point, they do illustrate the need for critical reflection. In Paul's words "Because of the enormous amount of research that is conducted nowadays and the large pressure to publish more and more, there seems to be little time and little desire for reflection. Where are we now, what do all these findings tell us, which angles receive too little attention?" If one then considers the way the history of the field is typically portrayed, there seems to be a clear tendency to emphasize progress. Scholars describe how limited, or wrong, research in the past was, and in contrast how much we now know and how much we can now do. But if one *really* delves into the history of the field, it turns out that this progress idea is actually a misrepresentation. It is better to talk about a continuous alternation of viewpoints. An alternation, for example, between a period in which mind and body are considered as integrated, with a period of Cartesian dualism (according to some a false trail from which the field has only recently returned). And an alternation between a period in which the dominant view is that each part of the brain can do everything, with a period in which the dominant view is rather that specific mental functions can be localized in specific regions of the brain.

A second reason why Eling's approach is interesting, is that one can obtain a much better understanding of certain positions from the past if one goes back to the original sources. Many scientists cite these sources, but without actually reading them. Eling's investigations of the history of aphasiology

show that this practice can lead to serious misconceptions. A good example is one of Paul's first articles, in which he reveals '*What Broca actually said'*. This shows that for more than a century, claims have been attributed to Broca about the lateralization of speech and motor control in the brain which he in fact never made. Another example is a series of papers in which Paul addresses the origins of the famous model of Carl Wernicke. These papers read like a detective story. The trailer is this. Carl Wernicke, a young medical doctor, came to Vienna in the late nineteenth century to pursue a PhD with Theodor Meynert, who was famous for his work on neuro-anatomy. It was Wernicke's first introduction to aphasia. Half a year later, at the age of only 26, Wernicke published his world famous dissertation. This story raised several questions to Paul Eling. '*Isn't it odd that a young man, with no experience in aphasiology to speak of, publishes such an influential work in such a short time? Has he, perhaps, taken his cue from someone else? If so, who? Was it Meynert himself, who got all the credits in the introduction of Wernicke's dissertation? Of was it a certain Baginsky, who Wernicke mentioned in only one short sentence?*' Read Eling in a library near you and find out…

Ladies and Gentlemen, I could provide many more examples of Paul Eling's contributions to documenting the history of aphasiology in particular or of the neurosciences in general. But I'd much rather give the floor to Paul himself. The title of his lecture is *aphasiology: where and how?*