

# Inspired<sup>3</sup> = Art \* Personal \* Science = 4 \* PRM

Marko van Eekelen<sup>1,2</sup>

M.vanEekelen@cs.ru.nl,marko.vaneekelen@ou.nl

<sup>1</sup> Institute for Computing and Information Sciences Radboud University

<sup>2</sup> Computer Science Department Open University of the Netherlands

On the occasion of the farewell lecture of Henk Barendregt I want to give little overview of the many ways in which Henk has inspired me. Also, I want to discuss how this inspiration influenced my career and even my daily life.

## Art

In the eighties of the previous century Rinus Plasmeijer and I were searching for ways to make functional programming more efficient. Inevitably, we came across  $\lambda$ -calculus. Obviously, we contacted Henk who was just finishing his, now famous,  $\lambda$ -calculus book. Being excited about the inherent opportunities to exploit parallelism, Henk brought a team together (including among others Bob Hertzberger and Pieter Hartel). But, how to get funding for this?

This is where art came in. Henk was in contact with Hans Koetsier who was an artist with a very broad definition of the concept of art. 'Making projects happen' was one of the ways to fulfil the definition of art. As one example of this art he created together with Henk a tomb stone for himself with a non-terminating  $\lambda$ -term on it. I believe it was some variant of a Y-combinator. In short, It was Hans Koetsier who made it possible that Henk talked with representatives of the Ministry that were about to start a new way of project funding. This was very successful. The resulting **Parallel Reduction Machine** (PRM)-project was directly funded, way before the ministerial plans for the new funding scheme were finished.

The PRM project was a big inspiration for me at the start of my life as a researcher. Many research results came out of the project. Since many of the project members got full professorships later (Henk Barendregt, Gerard Renardel de Lavalette, Rinus Plasmeijer, Marko van Eekelen, Pieter Hartel, Wim Vree) one could say that the biggest impact the project had, was that it turned out to be a **Professorship Realisation Machine**. What an impact for a single piece of art by Hans Koetsier!

## Personal

I have always admired Henk as a true scientist. He has set an example that inspires many scientists, myself included. Typical are his 24/7 dedication (a.o. discussing  $\lambda$ -terms before breakfast) and his 24/7 willingness to learn in every situation: any time, any place. This is not just learning scientifically as professor. It can also be the existence of a new fruit juice as he once discovered upon one of his visits to our home when he was waiting for five minutes.

For each person he meets, he tries to learn what is special in that person and he addresses that person when he thinks he or she can help with their special expertise, both in personal and in scientific issues. Henk is a **P**rofessoral LeaRning **M**achine.



Through Henk, I got fond of the  $\lambda$ -symbol, not for its meaning but just as a figure. Recently, I could not resist buying a  $\lambda$  side table to support my cup of coffee next to our couch (a picture of the  $\lambda$  in our house is shown above)<sup>3</sup>. It can be seen as a  $\lambda$ -bar variant as introduced by Klaus Berkling in 1982 for unbinding a  $\lambda$  (although he actually used a # sign). I think that if Klaus would have seen this table he would have used a  $\lambda$ -bar sign in stead of a # sign.

## Science

Of course, he inspired me a lot scientifically. During the PRM-project but also in later years inspiring discussions with him resulted in research papers and projects. I checked my list of papers and out of the 95 papers, I counted the papers I co-authored with him and the number of papers that according to my personal feeling were for a great deal the result of Henk's inspiration: 5 joint papers and 13 papers with other authors. So, he was inspirational for about 20% of my scientific career. Henk is a **P**ublication InspiRation **M**achine.

Thanks Henk, for the nice collaboration and the many inspiring discussions!

Marko van Eekelen (also on behalf of Lianne Dirven)

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<sup>3</sup> To restore the balance in our marriage we also bought a  $\pi$  variant....