To publish or not to publish.....

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Where is the time that science was for purity and fun? That era is long gone and has been replaced by publish or perish. The success of a scientist must be expressed in numbers. Therefore, now in 2011 we have this unstoppable train of ever growing numbers of publications and with that, increasing numbers of journals. Must be overwhelming if one enters the scientific arena as a highly motivated student to face the challenge to sort the value from the ballast. In the May issue of the Netherlands Heart Journal, Opthof and Wilde published the outcome of their struggle to create some order in the citation jungle [1]. This is a very noble attempt as the difficulties they faced are tremendous. For the analysis presented they used several parameters obtained through the Web of Science published by Thomson Reuters. This is a well-established source to obtain information on citation frequency and impact. The outcome is not really surprising showing the outstanding performance in this respect by Patrick Serruys, the best cited cardiologist residing in the Netherlands.

Several trends are described in the manuscript that are crucial to understand the process of the publication tsunami that has gained enough power to hit the scientific society. For many things in life, money is a key driving factor. For a scientist funding is related to output. Funding brings funding. Funding brings PhD students who have to publish enough papers to provide a defendable thesis in 3–4 years. Which several years later brings some additional funding to the hosting institute. For every actor, a rock solid CV with high impact publications is crucial when applying for national and international grants. In some institutes budgets are determined partially based on scientific performance

judged by the numbers as described in the article. Not to publish is not an option.

The tsunami that has already passed the beach involves genetics. The size of the population studied is increasing as well as the number of authors on the papers. There are papers appearing with > 100 authors, not in the acknowledgement but really on the paper [2]. Just imagine what these papers will do to a Hirsch index if all authors cite the paper just once. Especially if this is your field of interest and a series of these papers are published. It is easy to foresee that the 107 score by Serruys will not be the maximum in the future.

In the article the authors already conclude that the various parameters provide very different rankings. Therefore the ultimate assessment of scientific impact is still up in the air. In addition, a quick check of the data presented in the paper already shows a deviation of 20% of under reporting for authors with an uncommon name and pollution for authors with a more common name. In addition if an alternative system is used, such as Scopus provided by Elsevier, again very different numbers and rankings appear. So although the paper is accepted in a scientific journal, the reproducibility of the data has not been established. Even when one is willing to spend the time and effort to try to provide clean data, it is not easy. It is safe to support the most important conclusion of the study: ‘Therefore citation analysis should be applied with great care in science policy’.

The newest trend in funding is the formation of private-public consortia (BMM, CTMM, NIRM). Here, the economic impact of the science is central in the evaluation. What will be the return through translation and product development to our national economy? The same trend is observed for European funding. Eventually our system to judge the impact of science on society will have to cover these aspects as well [2]. Is the intellectual property well

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protected? Are there products coming to the market and do we create jobs? [3]. In the University Medical Centre Utrecht (UMCU) we would like to develop a tool to also incorporate this impact factor into the UMCU/index. It may happen that the number of jobs created in the future will be more important than the number of citations. And hopefully we will be able to go way above the 107 when creating jobs in cardiology related industry. Science is still fun, more then ever. However the purity of science for the sake of science is in danger.

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