

**Project proposal form**

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**1. Project title:** *A taste of success. Understanding the social context of scientific careers.*

**2. Commissioners / external clients:**

Company: Barret, the Honours College @ASU  
Contact person: Dr. John N. Parker  
Address: Sage South 156; Tempe, AZ 85287-1612, USA  
Email: john.parker@asu.edu  
Phone:

**3. Project coach:**

Name: Dr. Bart Penders  
Department: FHML, Department Health, Ethics & Society  
Address: Peter Debyeplein 1; 6229 HA Maastricht  
Email: b.penders@maastrichtuniversity.nl  
Phone: +31 (0) 43 3882457

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**4. Problem statement**

Success in all its forms is not uniformly distributed across scientists. A small fraction of researchers writes the largest number of papers; gathers the largest number of citations and manages to secure the highest number of resources to support their research and research team. This process has been observed and described before as the Matthew Effect in science. Current scientific reward systems actively pursue excellence, yet the operationalisation of what excellence is remains fuzzy. What does success mean, and how do researchers achieve or work towards success?

A very important, yet also very narrow way to define success is through the comparison of citations to a researcher's work. This operationalisation of excellence has shaped careers, online representations of selves and much more. What contributes to citation rates extends beyond the content of published work and into the social and political domains? In this Honours Research project, we will ask what characteristics successful researchers in a specific discipline share how they contributed to career trajectories and said success.

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Success, or excellence, is the result of evaluations. To evaluate differently, means to define and create a different excellence. The focus on publication and citation has for decades, stood at the heart of how scientists designed their own careers (or attempted to). We know very little about those experts who have managed to do so the most successfully. Who are they and how do they work?

### 5. Assignment

Ultimately, an increased understanding of 'scientific elites' across disciplines will help us understand how seminal work and prestige emerge. We draw methodological inspiration from the work of John Parker et al, but will focus on a different set of disciplines, one prominent at FHML. We will [1] select and study one category from the *Clarivate Analytics Highly Cited Researchers* list and, if required, further zoom in. Supplementary, we shall [2] study all Dutch authors in the complete *Clarivate* list. The latter study will be supplemented with a small number of in depth interviews to contextualise findings.

This research will require you to (1) carefully delineate what you will study, and where. It will also require (2) contextualisation, through consulting relevant literature on the topic. Subsequently, you will have to (3) gather data, (4) analyse data and (5) connect literature, data and analysis in a critical discussion of excellence and success.

As a result, the study will be a mixed-methods study, combining quantitative analysis of (online) survey results, and a qualitative analysis of open questions in this survey and the in-depth interviews.

### 6. Project result / product

- a. Every two months, the commissioner (Barret; Parker) will receive a written update of the progress, outcomes and status of your research.
- b. At the end of the project, a report or paper will be presented to Barret, preferably accompanied by an online presentation.

### 7. Advisor and Consultants

Advisor: Bart Penders, Caphri, Maastricht University, NL  
 Commissioner: John Parker, Barret, Arizona State University, USA  
 Consultant: Martina Franzen, Wissenschaftszentrum Berlin für Sozialforschung, D

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### 8. Literature and other data and information sources

Hicks, D., Wouters, P., Waltman, L., De Rijcke, S., & Rafols, I. (2015). The Leiden Manifesto for research metrics. *Nature*, 520(7548), 429-431.

Mas-Bleda, A., Thelwall, M., Kousha, K. et al. 2014. Do highly cited researchers successfully use the social web? *Scientometrics*, 101, 337-356.

Merton, R. 1968 The Matthew Effect in Science. *Science*, 159, 56-63.

Parker, J. N., Lortie, C. J. & Allesina, S. 2010. Characterizing a scientific elite: the social characteristics of the most highly cited scientists in environmental science and ecology. *Scientometrics*, 85, 129-143. doi:10.1007/s11192-010-0234-4.

Parker, J. N., Allesina, S. & Lortie, C. J. 2013. Characterizing a scientific elite (B): publication and citation patterns of the most highly cited scientists in environmental science and ecology. *Scientometrics*, 94, 469-480.