

## Comment to article by prof. Towpik

Malgorzata Blicharska

We live in strange times, times where everyone is obsessed with numbers [1], times where the value of a scientist can be reduced to particular indices [e.g. see 2] that become oracles for the hiring committees and funding agencies. Although being able to describe a phenomena in quantitative way is often necessary in the complex world we live in, in case of scientific work of individuals the simplifying focus on numbers only can be very misleading (as described in the study by prof. Towpik in relation to impact factor). In addition, it poses serious threats to our society at large.

Guided by number of publications, citations and, most of all, the impact factor, we lose sight not only of the quality of produced knowledge *per se* but also of the general social potential of a scientist. We simply do not see scientists' role in a wider perspective – as a part of the whole society. The enthusiasm for doing research, transmission of knowledge and experience to younger generation and long-term creativity of a scientist are hardly possible in such a rat race. As Einstein once said “creativity is the residue of time wasted” — but how can we waste our precious time intended for producing papers for high impact journals? The present situation harnesses also the quality of education, both at undergraduate and graduate level, as high quality education and supervision does not “weight” as much as highly cited papers produced. Another cost is increasing gender inequality, as women have a “disadvantage” of being mothers, which often disqualifies them just on the onset of their careers [3].

A side effect is also the fact that less and less female scientists fund families as it seems impossible to both take care of children and build a successful carrier. Finally, the social cost of increasing number of scientists going through the “burn out” stage of their careers is very high since it partially turns off the most educated part of our society.

I believe that the potential employers and funders should try to evaluate the general social value of potential candidates — their role both as knowledge producers and as members of society. Assessment criteria, apart from common research metrics, could be the quality of teaching, parental leave periods, number of children and other important social input of the scientist.

### Dr Malgorzata Blicharska

*Dr Malgorzata Blicharska  
Swedish Biodiversity Centre  
Swedish University of Agricultural Sciences  
and Department of Earth Sciences, Uppsala University  
Uppsala, Sweden  
e-mail: malgorzata.blicharska@geu.uu.se*

### References

1. Fischer J, Ritchie EG, Hanspach J. Academia's obsession with quantity. *TREE* 2012; 27: 473–474.
2. Acuna DE, Allesina S, Kording KP. Future impact: Predictive scientific success. *Nature* 2012; 489: 201–202.
3. O'Brien KR and Hapgood KP. The academic jungle: ecosystem modeling reveals why women are driven out of research. *Oikos* 2012; 121: 999–1004.