

**Conference “Beyond impact factor”, Bern, 21 November 2018**

Antonio Loprieno: Welcome and introduction

On behalf of the Swiss Academies of Arts and Sciences, a warm welcome to you.

Within the Swiss higher education landscape, we like to think of ourselves as the bottom-up, community-based science organisation. Universities focus on both the production of scientific results and the formation on students, funding agencies such as the SNSF support basic research and scientific careers, while the Academies understand themselves as sounding boards, as places of reflection of disciplinary cohesion and culture.

Today's colloquium is a case in point, because it aims at investigating the paradox inherent in contemporary forms of measurement of scientific performance: on the one hand, their use increases exponentially with the overall increase in science funding, which is good, I tend to think. On the other hand, we often hesitate in accepting them at face value, we entertain reservations about their fairness, their validity or their applicability. We evoke the difference of disciplinary cultures that limit their generalised use or the reductionist approach inherent in all forms of measurement.

Let's take one step back and look very broadly at the historical development. From a conceptual point of view, measurement of scientific performance can be achieved in two ways, a qualitative and a quantitative way. The qualitative, analogical path has been around for longer and is reflected in what we now call a peer review approach, i.e. the assessment by a scientific community that a scholar or a paper complies with the rules of the game, with the standards that identify a specific scientific community. The peer review type of performance measurement has grown exponentially and is at the basis of both academic appointments and research initiatives (excellence strategy, etc.), but it has its dark sides: the danger of arbitrariness and the danger of conformism, because it tends to privilege established over innovative views.

The quantitative path to measurement of research performance is the one that probably constitutes the major attention of today's conference. Historically, it represents a relatively new development. Impact factors and Times Higher Education rankings were unknown thirty, even twenty years ago. They represent the result of the emergence of a new logic in the administration of science, which is the logic of competition that has superseded the tradition logic of co-optation on which, e.g., peer review is based. In the logic of competition, scientific excellence is quantitatively measurable, not in

the primitive sense that more production is necessarily better production of science, but indeed in the sense that scientific achievement – both at the individual and at the institutional level – cannot only be measured by qualitative, but also by quantitative factors.

The quantitative, digital approach to the measurement of scientific performance has enormous merits and is widely used, e.g. in the allocation of research funds. But it also has its problems: it is not easily applicable to disciplinary traditions where the assessment of impact is elusive, because it invests the interface with non-scientific stakeholders (society, economy), and it has an economic strain, because it tends to privilege infrastructurally-heavy, i.e. “rich” scientific domains.

Therefore, scientific institutions and scholarly communities are now engaged in a dialectical exchange with both traditions of measurement. We use them both, but we are not really happy with either. What seems to me to emerge as a result of this dialectic are alternative forms of scientific assessment that I would subsume under the labels “strategic turn” and “personalised turn”. On strategic turn: more and more institutional decisions are not based on scientific performance, but on the strategic significance of a scientific domain from the point of view of the comparative advantage for the institution. Universities tend to invest money in domains where they think they can favourably compete in the future, not in those where they are necessarily more excellent at present. Thanks to the major role played by the logic of competition, we now tend to pay more attention to the promise (project) than to the status quo (structural funding). On personalized turn: I detect an increased tendency to circumvent the danger of disproportionate attention to quantitative indicators by judging candidates for a position on the basis of the few papers *they* consider significant. Another example: funding agencies try in pilot studies “personalised” forms of performance assessment that are not influenced by the track record of the Principal Investigator, not to speak of the lottery procedure (e.g. the Volkswagenstiftung), justified by the very professionalisation of grant writing that we academic leaders have so energetically supported during the last generation. Not to speak of the enormous challenges that the scientific assessment is going to be exposed to thanks to the enforcement of Open Access.

So, impact factor, h-Index, rankings, peer review: dam’ if you do, dam’ if you don’t. A lot to talk about, and especially a number of distinguished specialists to learn from today. Welcome to Bern and have a productive conference.