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EDITORIAL

Kindness in science does matter

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In the 1980's, neurologists, and especially those working in the field of movement disorders, were still an identifiable group. We knew each other, our working teams and our areas of focus. There were several opinion leaders, that had their own core area, but they still represented neurology in its totality.

And precisely that has changed since then significantly. Opinion leaders with their own focus within neurology have given way to highly specialized experts, and with the start of a new generation, we find generalists mainly in the area of clinical services and not in scientific forums. The peer group more and more gravitates around a main field of focus and workers in one field hardly know others outside that circle, even just on a national level, and these are usually only the few others whom we have met in clinical work or at congresses. In the age of Corona, we have even been forced to do without such meetings. Networks and cooperation with others are more and more crucial than ever before.

Our expert meeting on Parkinson last year was cancelled for the first time in 20 years due to the pandemic. That was a difficult decision for us, and looking back a serious setback for our Parkinson network, for our scientific work and the future generation. Of course, it was "only" a national meeting/event, but with repercussions for a number of international collaborations. We have heard it confirmed again and again that these personal meetings are essential for our daily work. In our clinical science, we have a common goal: to diagnose a disease and then to offer the best possible therapy. Science does not mean retreating into an ivory tower, conducting research for the sake of research.

Of course even in this field of clinical medicine, we can learn by reading and then climb the career ladder successfully in a dog-eat-dog manner. But real success can only be found when feeling very much at home in both the clinical and the scientific world. It is just not possible to learn everything important by mere reading: there are essential things that have to be personally experienced. The power of one's elbows is appropriate for climbing the career ladder quickly, but precisely not for the dimension of scientific sustainability. Ten years ago, the scientific community was shocked by the finding that when BAYER researchers performed in-house drug-target validation they could only reproduce about 25% of the results (Prinz et al. 2011): results that have been published in high-impact journals. AMGEN researchers reported even worse reproducibility with 11% (Begley and Ellis 2012), but it is clear that pharmaceutical companies taking published findings at face value could easily end up wasting hundreds of millions of Euros or Dollars following a dead end. The studies mentioned were mostly on cancer research, but a similar bleak picture arose in other fields (Baker 2016). As a reaction to this, new initiatives were put forward to amend the "replication crisis" (e.g., Mullard 2017), but most importantly, we hope that this shock has led the community back to the original aims of science: understand a phenomenon, solve a problem, cure a disease, but not to publish for the sole purpose of furthering one's own career.

On this point, we would like to quote Dr Swanne Gordon: "Before you know who I am as a scientist you need to know who I am as a person. It is my belief that seeing each other as people first leads to a less biased, kinder, more open and inclusive academia." When I look at my colleagues over their shoulders while they are at work, when I recognize their personal style of work and know what motivates them individually, then I am in a much better position to evaluate their work and achievements. I can better judge the appropriateness, the validity of their work, because their merely appearing self-controlled and self-confident is not always really enough for proper evaluations, and somebody's over-eagerness, while working can be easily construed in the wrong direction and over-interpreted. When we know other people personally, we can better judge what

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their achievements are really worth. This holds for review practices just as strongly. When writing a peer review, I have to basically trust the description of methods and the accuracy of the results. In hindsight, it is unclear whether cases of scientific misconduct such as Jan Hendrik Schön's in semiconductor physics (Reich 2009) or Haruko Obokata's in stem cell biology (Cyranoski 2014) could have been avoided by more peer group transparency. We believe, however, that knowing each other and being transparent about one's research helps to avoid outright fraud and will instill a sense of responsibility in the next generation of researchers who learn by role models.

But a personal conversation can also constitute another form of discussion. It is possible and in fact worthwhile to "develop visions", which do not have to be purely fact-generated. Cognitive Psychology has drawn attention to the importance of social interaction such as lab meetings in the development of scientific hypotheses and problem solving (Dunbar 2001). Informal meetings at conferences can have the effect of extended lab meetings where a variety of backgrounds and viewpoints is guaranteed.

In this way, very good ideas do evolve occasionally in informal talks during pauses, which, according to legend, in fact has already led to at least one Nobel prize. Famously, Paul Lauterbur allegedly scribbled down his first ideas to use the NMR technique to develop human MRI on a paper napkin of a hamburger restaurant (Hammes and Lange 2014). In 2003, he was awarded the Nobel Prize in Medicine or Physiology. But this "birth of ideas at the dinner table" evokes some negative connotations, so that we readily get the impression rather of private little cliques of white-haired men hatching out projects at the hotel bar. But that picture is an unfair way of looking at the meaning of informal talks. Of course in the modern world, we know that gender should not decide over the question of who is allowed to participate in the unofficial part of an event. But practicing fairness in this respect will take some time yet to become generally accepted. This also directly addresses the topics of social class and ethnicity, which probably also involves a rather differentiated form of social exclusion which is not immediately apparent but nonetheless does lead to the loss of capable workers and good ideas. These forms of discrimination can be subtle and unintended. Already being a member of the educated classes opens up doors, while belonging to other classes can close these doors just as quickly. We all get along best with others who show the same external signs and wear the same habitus as our own class (in the meaning of Pierre Bourdieu 1984). In this way, we do not only talk about our relevant scientific work but also about other popular themes in our social class. But when we make this relationship fully conscious, we can change it, and only then.

How can we improve diversity at scientific meetings? Some of the recipes are well known but still sometimes neglected: make considerable effort to invite women as speakers and provide for enough low-threshold opportunities for informal social interaction. Work-shops that mix veterans with new-comers at different stages of their career and that mix clinicians and basic researchers can help to establish important ties. Poster sessions might not be as prestigious as key note speeches, but they are a great opportunity to get to know the opinion leaders in a field in a setting less intimidating than asking questions when there are 4000 attendants in the audience. That means that conference organizers should also provide enough time and space for the informal chat over coffee. Finally, the veterans should also realize that it is their responsibility to make themselves available rather than to stay in their bubble: discussing ideas with the next generation regardless of their gender, social, and ethnic backgrounds should be as important as preparing the next grant application, publication, or attending committee meetings.

Whoever participates in events such as the Expert Meeting has already shown that he or she is a social being. In the critical sense of the word, we could also use the term Homo sociologicus (Dahrendorf 1964), that is, as someone who is a being conditioned by society and subject to norms, values and expectations. Is it possible that our system maintains itself in the way that Talcott Parsons described in his Structural–Functional Systems Theory. According to Parsons, structures sustain themselves through adaptation, goal attainment, integration and latency (Parsons 2003). We think that would be too critical and in fact pessimistic, although sociology does often take a critical look at our behavior. No. Our Expert Meeting should rather be the exact opposite and: dismantle existing boundaries and prejudices, integrate, be open for novel ideas, motivate young talent, and remove hierarchies. We do not want business rivalry fighting for individual success but rather progress in our whole field of endeavors. Observations on social animals shows again and again that it is not the physically strong individual who survives, but often the individual who behaves in a caring, prosocial manner and thus contributes to the common good. Cooperation and prosocial behavior are seen in various animal species to various degrees (Cheney 2011; Silk and House 2011), depending on social relationship, form of communication and the rewards (Cronin 2012). Interestingly, many social species also appear to favor fairness and react negatively to inequity of outcomes (Brosnan and De Waal 2014). This has been described, not only in primates such as chimpanzees, macaques, or capuchin monkeys, but also in dogs, dolphins, and ravens. That said, scientists should not be disparaged as being mere social primates. On the contrary, social behavior and kindness should be viewed as basic preconditions for productive scientific work. Of course, we will always need some source of personal self-motivation and aspiration, we of course need competition, but clinical science must not be an end to itself.

In December 2017, scientists in New Zealand held the first 'Kindness in Science' workshop. The group's mantra was "Everyone here is smart and kind—do not distinguish yourself by being otherwise." That was an excellent approach, which we recommend as well worth keeping to. Putting up borders to other workers in our field or overemphasizing our contributions at the cost of those of others, seriously impedes progress. This is precisely what can occur when we think only along national lines or ignore the work of other languages or cultures from the outset, a priori. Our group has understood very well that the winner-takes-it-all model is not the appropriate way to make major breakthroughs in research.

Clinical science should not function in the way the economy does. The chief concern for us is not maximizing profits or any form of impact factor. There is much more at stake here: namely sustainable approaches. But, surprisingly, even in economical thinking on principles of the market, we find the interesting approach given by Adam Smith's question: "What is more meaningful: general social happiness or one's own personal, private happiness?" An ideal solution to that question would involve a combination of both. And so, when we meet and aim at sharing scientific knowledge, and of course hope to further developing therapies for a disease, we will be striving for both, success for society and for all of us as individuals.

In all these years in which we have come together for our Expert Meetings, we have had an extensive exchange on a scientific level, about many interesting projects, which may have then been published. During all this time, we have also developed an almost family-like structure which is open for ideas across the generations and the different sources of support. Our debates can turn very lively, perhaps even intense, but they remain respectful and friendly. This matches our concept for scientific networking. In our opinion, evolution in science should never be survival of the fittest, but of the brightest and kindest.

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