

To,
Prof. Dr. Martin Stratmann
President of the Max-Planck Society
Hofgartenstr 8,
80539 Munich

Cc:
Prof. Dr. Johanna Wanka
Federal Minister for Education &
Research
Heinemannstr 2,
53175 Bonn

Subject: Lack of future prospects for young scientists in the MPS & Germany

Respected Readers,

We are a group of young scientist (Nachwuchswissenschaftler) WORKING¹ on our PhD/Postdoc projects at the Max-Planck Institute for Biophysical Chemistry in Göttingen. To begin with we are a mixed group of German & foreign nationals² hence we choose to communicate in English as its the international language of Science (and will also make it easier to openly communicate this letter to the media or international scientific community if required in future). But before we openly discuss our problems we want to first try to reach our to the MPS & BMBF with the hope that maybe our problems will be heard and the necessary steps taken. We do not represent the official 'PhD/Postdoc Committee at MPI BPC', infact none of us are current members of the same. We are just a group of 'random' young scientists who want to give you our DIRECT feedback on the various aspects of the MPS/German Academic System (hereafter referred to as the **GAS**) along with some impressions of our real life situations and problems. Infact many of our problems and solutions are from other PhDs/Postdocs who were not directly involved in the drafting of this letter, but inspired us with their valuable and genuine opinions that they put forward during the recent SAB (Scientific Advisory Board) at our institute! With more than 850 employees our institute is the BIGGEST MPI in Germany, hence we are sure that THIS feedback based on our REAL LIFE situations and those of our friends in the Univ of Göttingen IS REPRESENTATIVE of all young scientists in various institutes and universities of Germany.

1. YES as PhD scholars and Postdocs, we ALSO WORK in the various labs of this country, AND NO it is not a white-collared job like a clerk (Sachbearbeiter/in) hooked onto a PC! Instead most Natural Science projects involve substantial physical labor in preparing samples (Proben), measuring them on various devices (Messgeräte), besides the immense mental work right from project design to final data analysis and presentation! So Natural Scientist are among one of the fewest professionals like Pilots, etc whose profession involves both substantial physical and mental labor! Hence we want to first of all point out that 'Researchers' is also WORK HARD, hence should be treated equally as ALL other hard-working professions and thus should be paid well. Hence the negligence towards PhD/Postdoc jobs which are often considered as 'Ausbildung' in the GAS and paid petty stipends is UNFAIR & ILLEGAL! So the government should treat the scientific profession with fairness and show same value towards it by making the wages in the GAS comparable to those of other professions! We don't need to remind you that although Science is one of the worst paid professions, but still we chose to pursue it and although a typical full-time (100%) contract expects a scientist to work around 31-39 hours per week, most of who drafted this letter work around 50-60 hours per week! And NO we don't work that hard, because we LIKE/WANT to, but simply because otherwise there is no way to reach our scientific goals &

targets within the short term contracts/stipends that >80% of young scientists have to work with! Just because we are driven by the passion for discovery and invention doesn't mean that scientists should be exploited! Unfortunately that exactly what's going on currently in the Natural Sciences in Germany!

2. Max-Planck Society proudly considers itself a world-leader in R&D but they must not forget that 'almost half of the 'young scientists (PhD/Postdoc stage) ACTUALLY drive their research AT BENCH (to generate knowledge, patents or even bring Nobel Prizes) **are foreigners!** Hence MPS depends highly on highly-qualified international talent (specially from 3rd world countries*) to fuel its R&D, but still it's SHOCKING to know that NONE of the MPIs has an official 'International Office' to help its substantial foreign employees! Hence although the German State expects obligatory health-insurance, most foreign scientists end up with cheap, inefficient insurances which hardly cover any major expenses! And although the German State has a so-called 'Blue Card' (BlaukarteEU) to compete with the American Green Card system, hardly any of the newly arrived foreign scientist at MPIs are properly informed about it. There is NO assistance to get their residence permits. In short they are left alone to fight through the 'jungle of German Bureaucracy' (which is complicated enough and notoriously infamous EVEN among German nationals) and often end up with grave problems regarding insurances, residence permits, etc. It is noteworthy that the German State considers Natural Scientists (Naturwissenschaftler) among the professionals in demand (Mangelberuf) because their own schooling system is not able to supply the required number of highly-skilled & well-trained professionals. So to sustain its R&D Germany continues to attract 'highly qualified professionals' (Hochqualifizierte Fachkräfte), again majorly from 3rd world-countries which often have a high standard of well-qualified students in Natural Sciences* to retain its global position as a leader in Technology and Industry, but the GAS is not attractive enough to retain these young scientists that were invited to fuel its R&D. With its short-term contracts/stipends, lack of foreign-assistance and lack of permanent positions the GAS soon becomes unpopular to the talented young scientists who finally end up moving to more welcoming and supportive nations like USA, UK, etc.

*http://www.bamf.de/SharedDocs/Anlagen/DE/Publikationen/EMN/Nationale-Studien-WorkingPaper/emn-wp53-gewinnung-hochqualifizierter-drittstaatsangehoeriger.pdf?__blob=publicationFile

* <http://www.make-it-in-germany.com/>

Irrespective of our nationalities, ages, genders, there is one thing common among us all – we are frustrated and disappointed and see no future prospects for the 'Natural Scientists' (Naturwissenschaftler) in MPS/GAS and hence most of us feel highly unsafe & insecure with the present GAS and are compelled to contemplating on leaving Germany for more conducive environments (like USA, UK, Canada, Australia, etc) or completely leave Academia and settle for 'Industry' both of which against our wishes, but we don't see much choices otherwise. And ofcourse just that we contemplate neither means that it's easy and nor does it mean that we will be able to find a secure future. We are sure some of us will end up being without a job for sometime and some might even have to completely give up Science and try to struggle to get some non-scientific jobs (most of which anyways don't want to hire 'overqualified scientists')! We have lost hopes on our scientific careers but we hope that our voices will help the highest authorities (YOU) to reform the GAS, which might save the careers of the future scientists to come.

One of the reasons to communicate directly with you is that recently we had an international evaluation of our institute - SAB (Scientific Advisory Board) but after our meeting with the Vice-President of the MPS, we are not sure of the willingness and commitment of our institute authorities towards our problems. We guess things won't change in the near future and the SAB will end up to be a

mere formality like the last ones. Hence we decided to directly communicate our issues with you, as the fine details are often lost in transmission through the numerous layers of hierarchy/bureaucracy and finally the highest authorities end up TAKING the most important decisions ABOUT OUR careers/lives/futures without being well aware of the **actual situations** down there. We don't want to sitback and wait till ,by chance' things fall into place. As problems are not solved without any efforts! So we make this effort! But it might not be the last one.

There has been a lot of talking going on recently** to facilitate young scientists (Nachwuchswissenschaftler), and BECAUSE of petitions (like 'Perspektive statt Befristung') from scientists themselves, finally the HORRIBLE 'Wissenschaftszeitvertragsgesetz' (no wonder there is no English word for this as all other nations value their scientists hence such a senseless Law exists ONLY in Germany), has been reformed (Novellierung des WissZeitVG). We are glad and would like to thank all right from the initiator **Stefan Raupach** to the one who finally made it happen - **Prof. Dr. Johanna Wanka** and all the people who contributed, BUT we will explain later how although **its a good beginning**, these reforms are NOT sufficient to sustain the future generations of young scientists of the GAS in the long run!

** <http://www.perspektive-statt-befristung.de/links.htm>

The problem is that whenever young scientists express their problems the first reaction from politicians/authorities is to make 'committees', of course LOTS of them! But SADLY most of the people involved in those committees are well established Univ Professors/MPI Directors who are FAR from the actual realities and WE the PhD students/Postdocs (to whom it actually matters) are NEVER given a chance to directly represent ourselves or be a part of any such committee or to be involved in the decision making process. We are never directly allowed to put forth our opinions. Besides there is no guarantee of anything being done about our problems as we are anyways never allowed into such closed doors behind which all the IMPORTANT decisions are taken about OUR lives & careers!

So we would like to openly share with you our problems, and NO we don't want to only complain, we also want to propose solutions, YES ways we think might help to tackle the problems. Of course we don't claim that we are geniuses and we have it 'all figured out', of course our suggestions might not be perfect, but atleast they might help to make a beginning, upon which one can always improve. The problem we mainly think lies in the 'old-fashioned', 'conservative' and 'authoritarian' attitude of MOST of the top administrators who run the big 'EMPIRES' of the German scientific landscape - AvH Stiftung, MPS, DFG, Fraunhofer G, HRK, Leibniz G, Leopoldina, DAAD, Helmholtz G, etc (in short the 'Allianz der Wissenschaftsorganisationen')! Hence some of our suggestions might seem like '**questioning our authority**' to many of the established Univ Profs/MPI Directors running such organizations, but someone, someday and somehow has to face them straight in the face and tell them, that the way they run the scientific 'empires' today is not much different than a cheap-labor factory fueled by cheap-labor stipend holders from the 3rd world!

So instead of merely making provocative statements we want to present a few facts with descriptions and corresponding solutions!

FACT A:

There is GRAVE NEED for more permanent positions in the German Academic System!

Description A:

The REASON why 'Novellierung des WissZeitVG' is NOT ENOUGH to solve all problems is because, as creation of Tenure Tracks or providing some relief on the number of years till one is KICKED out of the academic system, only provides a few more years for the young scientists, but what about the career AFTER the Tenure-Tracks ends or the extended period is over? Until and unless MORE permanent positions (like Professorships) are URGENTLY created at ALL the Univ Hochschulen & Institutes of Germany, the reforms will simply delay the phenomenon (hence push the problems a bit more into the future) BUT AGAIN lead to the same problems for the young scientists – 'being jobless due to lack of sufficient permanent jobs in the GAS!' Infact it makes the situation WORSE, as these jobless scientists would not just be qualified Postdocs, but rather qualified Groups Leaders/Junior Professors who are now **even more 'over-qualified'** to get any other jobs outside Academia! Hence without more permanent jobs, the current 'bottle-neck' will remain, only be shifted further along the academic career-path! And no we are not presenting some kind of fantasy! We ACTUALLY know such people personally who did not find any professorships, when their Tenure-Tracks ended and became unemployed because the univs did not sufficient Professorships to absorb them! They had no other option than to compromise and work in other professions (if they at all found some jobs) to support their families! Another factor that adds to the problems is that more and more retiring Profs/Directors continue to work on "extensions" and with NOT ENOUGH Professorships being created, the young qualified Junior Profs/Groups Leaders find NO jobs! And NO they did not get Professorships because they were 'NOT GOOD enough' (the fact alone that they won prestigious & highly competitive Tenure-Tracks shows that they were promising top scientists), infact they had high impact publications in top journals of the natural sciences (like 'Nature from NPG' & 'Science from AAAS'), but the reason that they are still jobless was simply that there ARE NOT ENOUGH Professorships to accommodate ALL the TALENTED young scientists in Germany! Not to forget things like 'Frauen-quota' which often leads to WOMEN being selected to positions, SIMPLY to fulfill the political 'quotas'. Its widely accepted that **less than 2%** of ALL the students who graduate with a PhD in Germany will be able to make it get a **Professorship** (which is the ONLY major permanent job in the German Academic System). Other **permanent** positions like '**Academische Rat**'/'**Wissenschaftliche Mitarbeiter**' are even more rare and insignificant in number in comparison to the number of students who begin their studies in the sciences. Not to forget that although there are not enough permanent positions to accommodate its OWN young scientists, Germany actually tries to EVEN attract young scientists with PhD/Postdoc experience from all over the world! Hence the number of competitors for the insignificant number of permanent positions in the GAS is **EVEN more!**

Furthermore we don't need to show you statistics to prove that every year the number of students choosing to study at the various German Universities is

increasing. Further factors like reduction in schooling years, conversion of military training/social service from obligatory to optional, removal of Tuition Fees (Studiengebühren), attraction of Germany as education destination for foreign students and finally the increased trend among German youth to prefer univ studies (Studium) over vocational trainings (Ausbildung) have led to HUGE rise in the number of youngsters who begin studying at the various German Universities. And its not a surprise that a large number of these students study the Natural Sciences (Naturwissenschaften) leading to excess youngsters trying to pursue a career in the Natural Sciences! BUT NEVER EVER during their studies are these innocent young students of Natural Sciences INFORMED that **LESS than 2%** of them have the chances of a successful academic career (permanent jobs like Professorship) in the GAS! Hence we cannot think of any other field of study/vocational training (Studium/Ausbildung) where the chances of success are as bad/worse! This is simply unfair/illegal to **ALLOW** (in the first place) SO MANY youngsters to begin their studies in this field when the GAS can not guarantee enough permanent jobs to them! Isn't this the job of the government to keep a control on the number of students that should be allowed to begin studies in a field like the Natural Sciences where the GAS can not provide for sufficient jobs (only 2% chances of a success as a permanent position - Professorship) to these students after completion of their studies! It might be worthy to note that this makes a qualification in the 'Natural Sciences' one of the worst career options for the young generation as we can not find any other field where after their apprenticeship (Ausbildung/Studium) the freshly qualified youngsters fail to get a job with proper contracts. Whether it be a baker or a banker, in ALL other professions there are sufficient jobs to provide proper employment for freshly qualified youngsters who get proper jobs with proper contracts, which mostly become permanent (unbefristet). But it is ONLY Natural Sciences in the GAS, that even after a Univ education (Studium), young scientist who continue to research as PhD/Postdoc are not able to get proper jobs and the only after almost 10 years of unsecure, short-term stipends, LESS THAN 2% of them get permanent Professorships (while the rest 98% are FORCED to leave the Academia)! Isn't this UNFAIR to attract thousands of youngsters into studying Natural Sciences when less than 2% can get a permanent job? This huge mismatch in the proportions of supply (lack of permanent jobs) and demand (50 times more qualified scientists as jobseekers) can be compared to the 'unregulated and corrupt banking system in the USA' which led to the last global economic crisis. Just as this crisis was already predicted, we can also clearly predict that if sufficient permanent jobs are not created URGENTLY the German Academic System will also collapse soon and the Employment Office (Arbeitsamt) will be flooded with **unemployed scientists, who would be OVER-qualified for most other jobs!**

SOLUTION A:

Create more permanent jobs in the German Academic Setup.

There are not enough permanent positions (like Univ Professorships/ MPI Directorships) in the current German Academic Setup, then the ONLY solution is to CREATE MORE! We agree that it is IMPOSSIBLE to offer EVERY student of the Natural Sciences a Univ Professorships/MPI Directorships at the end of their studies/PhD/Postdocs! But then frankly speaking every student of the Natural

Sciences **DOES NOT WANT** to become a Univ Professor/MPI Director! We are not stupid and we realize that EVEN if we all want to become Pors/Directors, we REALIZE that its simply not possible. Just like not every student of Law (Jura) wants to become a 'Richter' or not every student of Economics/Finance (BWL/VWL) wants to become a 'Geschäftsführer' in the end! If one compares it to other professions, it becomes clear that unlike all other professions where besides the top posts (Geschäftsführer/Richter) there are MANY MANY other permanent jobs at various levels of hierarchy, there are NO SUCH WELL-DEFNIED mid-level jobs in the Natural Sciences! There is a huge void in the hierarchy of the academic system between the top (Univ Professorships/MPI Directorships) and the beginning (PhD/Postdocs). And we also understand that not ALL of US young scientists have the credentials to reach the top of the German Academic Setup - Univ Professorship/MPI Directorship. But we would OF COURSE like to STAY in Natural Sciences and would MORE THAN HAPPY to get simply the mid-level jobs. Hence like in other countries we URGENTLY need mid-level positions like Staff Scientists at various levels! Hence we request the BMBF to create many more **mid-level permanent jobs** like multiple Lecturer/Reader/Associate Prof/Assistant Prof/ etc per department (pro Abteilung), like in MANY other countries (USA, UK, France, Scandinavian countries, etc). For example **atleast 3 PERMANENT Scientific Staff (Wissenschaftliche Mitarbeiter) positions per Professorship/Directorship.** Hence when a new Professorship/Directorship is started, then it is clear that the young professor will be active till his/her retirement (which is around the next 30-35 years), hence it is **NOT so DIFFICULT to also PROVIDE 3 (or more depending on size of the department) permanent Scientific Staff Jobs** for each such Professorship/Directorship, hence create more permanent jobs in the GAS!

FACT B:

MPI Directors/Univ. Profs are FREE to DO WHATEVER they want! OR Exploitative employment of young scientist by Profs/Directors with lack of mentorship in career development.

Description B:

For example during the recent SAB (Scientific Advisory Board) at our institute when we met the SAB, our concerns were noted down to be forwarded to the '**Directors**', so that **THEY** could then decide upon the issues! The conflict of interest arises from the fact that most of our concerns ACTUALLY arise due to the way things are run by those VERY Directors! So we really doubt that (after getting our concerns via the SAB) those Directors will ADMIT that the way the run their departments is WRONG/ILLEGAL and ACTUALLY DO something about it! Furthermore during this SAB, we had a chance to talk with the Vice-President of the MPS to share our problems with him. Interestingly his most common answer to most of our problems/complains was "*I'm sorry we at the MPS can't tell the Directors what to do, they are given the freedom and they are free to do what they want/how to treat their staff/how to run their empires. We can sometimes negotiate with them as to if they fulfill these criteria, then maybe they can get their new toys!*" Exactly '**empires**' & '**toys**' were the very word he used

and this needs not much explanation to how much unaccountability, lack of control the MPS allows the 'Directors' to enjoy unlimited powers like autocratic monarchs/spoilt brats with almost COMPLETE freedom in their affairs. Unfortunately such immunity towards vigilance makes the Directors almost free from any form of accountability for their conduct, in spite of them being just like any other citizens, who are supposed to abide by the Law! Hence its not a surprise that one might have never heard of a Univ Professor/MPI Director being held accountable for misconduct towards his employees and being punished by law for the same! But it would not be highly improbable that Univ Professors/MPI Directors might have not done such things, as being humans the Univ Professors/MPI Directors are equally liable to commit mistakes, including mishandling of employees. And being human afterall, its is not surprising that such immense power is also often abused! If they can be equally liable to break other laws like traffic laws, then why not laws governing proper handling (we don't even want to go into more complicated aspects like 'sexual-misconduct' as of now, we simply want to stick to the 'non-sexual mishandling aspects' in terms of exploitation of young scientist by lack of/improper pay, lack of mentorship, lack of support in future development, etc) in scientific institutions by their Prof/Directors! One reason might be that there are unfortunately not much clear laws to control that. Maybe a niche in which law-makers need to look into to develop better laws to control and regulate the academic establishments.

During the SAB, as an answer to 'what is the MPS doing to tackle the problems of young scientist?', the Vice President mentioned that they have a made a 'Kommission zur Nachwuchsförderung' headed by Prof. Dr. Reinhard Jahn. The problem is that the majority of such committees are dominated by authoritarian, power-abusive Profs/Directors making it impossible for the few like Prof. Jahn (**great scientist AND great mentor**) who want to actually improve things. No wonder Prof. Jahn himself once stated - "Es ist erschreckend, wie viele Merkmale eines mittelalterlichen Feudalherren auch heute noch auf einen Professor oder Forschungsdirektor zutreffen." (Its terrifying, how many characteristics of feudal lords from the middle-ages, apply to Professors or Research Directors of today!)

We hope the readers will agree that even if a Univ Professor/MPI Director is a world-famous scientist who has made major contribution to the advancement of knowledge in his/her field or EVEN won the Nobel Prize, it DOES NOT automatically mean they are the BEST EMPLOYERS who never mishandle their employees and are PERFECT HUMAN BEINGS who can never do anything unethical/illegal! We guess after all they are human beings just like you and us. Even if they win Nobel Prizes, that does not make them higher than the Law of the country and hence it should not guarantee them immunity against legal actions or give them uncontrolled freedom to run their 'empires' the way they want. And the reason why we take the pains to enlist these points is that if the Univ Professors/MPI Directors were doing everything all right, then such things would not have happened:

- a. Univ Prof/MPI Director hire employees (mostly foreigners) as 'cheap labour' on stipends/fellowships (which provide no coverage of health insurance, social security and pension benefits), while on the same time

the same Univ Prof/MPI Director hires other employees (mostly German Nationals) on proper working contracts (covering of health insurance, social security and pension benefits)!

- b. Among employees with Contracts Univ Prof/MPI Director hire different employees on different LEVELS (Stufen) EVEN if they have the SAME QUALIFICATION/EXPERIENCE! This is unfair to those employees being paid less for the same job (Leistung).
- c. Often scientists are not paid and are compelled to WORK for months/years after their initial stipend/ contract runs out to finish their doctoral thesis (Doktorarbeit)/ Publication without any income at all! This is specially shocking for foreign scientist who also can not unemployment support (Arbeitslosengeld). Is this not exploitation? Research done in various departments is also WORK (its NOT Ausbildung) as the Univ/MPI retains the right over the results/patent/output of the research, hence the people who ACTUALLY conduct the research (PhDs/Postdocs) should be considered as EMPLOYEES and be paid with proper contracts for every day they work! We also don't need to remind the readers that a typical young scientist (PhDs/Postdocs) works MUCH MORE than the '39 hours per week' expected by a stipend/contract! The young scientists (PhDs/Postdocs) never complain about this being unfair in comparison to other professions (where final pay is tightly dependent on working hours & **over-hours are also paid**) because we choose a Natural Sciences as our profession due to our passion for the subjects, but it is unfair that our passion and dedication to work much more than mentioned in a typical contracts is often abused and exploited in terms of no-pay/ill paid stipends.
- d. Foreign scientists who are compelled to take a break during their work due to medical illness/injury/ pregnancy are not supported as most of them are hired by the Univ Professors/MPI Directors on stipends/ fellowships (which do not coverage such health/social security/pension benefits). Yes we know foreign women scientists who had to take breaks due to pregnancy & did not get ANY kind of financial support during the baby-pause simply because they were financed by 'cheap-exploitive' stipends which did not cover any such benefits (richtige Krankenversicherung/Mutterschutz/Socialsicherheit/Arbeitsunfähigkeit srente/Rente/usw).

SOLUTION B:

Make strict regulations on how Professors/Directors are allowed to run their departments & there should be annual vigilance to punish those guilty of misconduct.

One of the main reasons for the overcrowding of young scientists in the Natural Sciences is the lack of regulation on the number of employees per department. It is not a surprise that many young scientists (PhDs/Postdocs) currently feel lost and left alone to survive the brutal academic career-ladder (**with less than 2% chance of permanent positions**) as their mentors - Univ Professors/MPI Directors are always SUPER BUSY in writing grants to attract MORE & MORE 3rd-

party funding to fuel their R&D empires to hire more and more employees). In short the Univ Professors/MPI Directors end up becoming selfish masters, who simply want to hire as many as possible (often with the help of exploitive-fellowships) young scientists as 'cheap-labour' to run their factories to produce more data and publish more papers win their Nobel Prizes to attract more 3rd part-funding so that they can hire more cheap labour & grow their empires. It like a vicious cycle. They HARDLY care about the future career/development/job-security of their young scientists! Its not difficult to realize that its **impossible** for any normal human being to establish sufficient professional relationship with each of these dozens of employees to know them ALL well enough to provide solid mentorship. Clearly the Univ Professors/MPI Directors is least interested in the mentorship and helping the young scientists to groom their own careers. The golden days of science are gone, when tutelage and mentorship was as important as research output, sadly the latter has dominated the former, turning the mentors into self-centered, uncontrolled, greedy autocrats (similar to the greedy bankers who led to the recent global financial crisis). Hence there needs to be a law to control the number of scientific employees (PhD/Postdoc) per Univ Professor/Director, which should **in no case be more than 10**. Permanent positions like Lecturer/Staff Scientists/Assoc Prof/Asst Prof. etc (which need to be urgently created) should **NOT be considered within these 10**, as these are independent scientists who do not need intensive mentorship. Some might argue that such restrictions might drive off talented young researchers to not establish their labs (as Univ Profs/MPI Directors) and rather choose other countries like USA, etc where such restrictions don't exist. But then if such so-called 'talented minds' don't understand and appreciate the reason of greater good behind such restrictions then I guess we don't need such greedy, selfish talented minds as our mentors. We as young scientists (PhDs/ Postdocs) boycott such selfish minds.

Further more just like Thesis Advisory Committees for scientific guidance for PhDs, there should be **Mentorship Advisory Committees** (comprising of 3 Profs) for EVERY Postdoc, so that he can get SOLID mentorship and constantly assess his/her career prospects, and within 3 years of starting his/her postdoc, he/she should get clear guidance whether to stay in/leave academia. This will help remove the unstructured, unregulated & un-organized situation now which leads to immense amounts of insecurity and chaos among the minds of the young scientists in terms of their future prospects in academia! And for the 98% who have to leave academia, there should be **Non-Academic Mentorship Programs** in close collaboration with partners from Industry/Publishers/Consultants/etc so that the prospective employers and employees can be brought together to facilitate the employment of the young scientist who can not be supported by the limited positions in the GAS!

Not just the number also the financial affairs of the Profs/Directors should be more closely monitored! Anybody who has spent a year in the GAS already knows that although the research budget of Germany & EU is constantly increasing and there are more and more new foundations/organizations and funding agencies who offer huge grants worth millions of €, BUT when the successful 'big-shot' Profs/Directors win such grants, they use the lion's share of the money to buy their 'toys'! We agree world-class R&D is not possible without the high-tech instrumentation, BUT its widely known that MOST of the high-tech

instrumentation bought in Academia is HIGHLY UNDER-utilized! Its NOT uncommon in a small town like Göttingen that multiple copies of the same expensive equipment are lying around in many labs (just because their Profs/Directors had the money & decided to buy it). Its not without reason the Vice-President of the MPS, referred to such ultra-expensive equipment as 'toys', as often the ownership of such high-end equipment is often are more a matter of prestigious/status/ than being justifiably to be owned by multiple groups in the same town! Of course the feudal Profs/Directors like to show off their high-end equipment as trophies of the big grants they have won! We think that instead of wastefully buying such super-expensive equipment, majority of the grant money should be dedicated to hire staff scientists & thus create more long-term positions in the GAS! Else its comparable to a rich brat buying dozens of expensive super-cars & aircrafts, although he has no pilots to drive/fly them! Furthermore the purchase of such super-expensive equipment (funded by the tax-payer's money) should be better regulated. Repetitive purchases of same instrument in same institute/univ/town should be not allowed (as the scientists can easily share such ultra-expensive instrumentations as 'Core Facilities'). We suggest the better utilization of the grants in hiring more scientists than buying more of the same equipment!

Talking of wasteful expenditure of resources – wastage of energy is ANOTHER BIG problem which causes loss of millions in the GAS! If we consider the million of Watts of electricity that is constantly wasted in the various labs of the various univs/institutes of Germany, it costs the academia millions of € (again tax-payer's money)! Everyone in GAS knows that millions of lights, computers and other instruments are rarely switched off/shutdown when not being used. The consume energy each second over years and years which is such a BIG WASTE! We can understand that there are CERTAIN instruments which can not be always turned off & on, but this is a negligible fraction! So if Profs/Directors(authorities made it a point to compel their staff to switch off the millions of lights, computers and other instruments when not being used, we are sure that it can save millions of €, which can again be better utilized to create more long-term jobs for scientists in the GAS!

On the same lines, millions of € wasted on superfluous architecture & decoration in various MPIs & other institutes of the GAS are another avenue which could save more money for creating more jobs in the GAS! For example the newly inaugurated MPS (Max-Planck-Institut für Sonnenforschung) is a great example of such waste of money! If one enters the Foyer, one is shocked to see the "wonderful exhibits"! It looks like they are prepared for a Tag-der-Offene Tur 365 days a year or maybe someone thought it's a great idea to make an MPI like a Museum on Astronomy! All the expensive "deco" was totally unnecessary, as it was supposed to be an INSITUTE not an EXHIBIT/MUSEUM! This is not the only example, there are thousands of such superfluous buildings where tax-payer's money was WASTED to create "fancy" institutes! We think, that its not the fancy "deco" which drives the scientific output (publications/patents/etc) of an institute, rather it's the people! So we suggest GAS should be regulated to not waste money on deco, instead to INVEST on the scientists who ACTUALLY bring the output!

FACT C:

How the 'prestigious' stipends/ fellowships make the current German academic setup not much different than cheap-labour factories, which exploit young scientist in huge masses to produce high impact R&D at cheaper-labour costs!

Description C:

If one looks at the statistics its clearly evident that the majority of the PhD/Postdoc positions are hired as stipends/fellowships. Natural Sciences (Naturwissenschaften) is among the major fields where there is high demand (Mangelberuf) and Germany is HIGHLY dependent on foreigners for this! These foreigners are HIGHLY QUALIFIED individuals (often with PhDs and even Postdoc experience) and highly seeked by the German research institutions due to the high quality of their education and their dedication to the Natural Sciences.

Unfortunately these gullible young, scientists are tricked into joining the various scientific institutions (MPS, Fraunhofer, Leibniz, Helmholtz, Humboldt, etc) by offering them 'prestigious' scholarships/ stipends. Without having a knowledge of the possibilities, the talented foreign scientists accept these fellowships only to realize that the SAME job/position is also being offered to other colleagues (mostly German nationals) with PROPER WORKING CONTRACTS (which include taxes, health insurance, social security, pension benefits, etc)!

Why should not EVERYONE who is doing the SAME job not deserve the SAME PAY irrespective of their colour, creed, nationality & origin? Isn't this a clear discrimination and illegal, being against the fundamental law of equal treatment of all human beings? Ofcourse the reasons are clear, a proper contract (including taxes, social security, health insurance & pension benefits) costs almost 2-3 times than a typical stipend/fellowship (which do not cover taxes, social security, health insurance & pension benefits). Hence the employer does not have to cover the cost of taxes, social security, health insurance & pension benefits. Isn't this illegal, as EVEN if it's a foreigner they also LIVE in Germany HENCE they also use the basic infrastructure of the German state (like public transport, health care, basic infrastructure, etc) hence they should also pay their taxes, LIKE ALL OTHER German nationals in all other professions! Why should there be any difference/exception made for income tax for employment in the academic research institutions? Furthermore every individual (irrespective of their nationality) can fall sick and hence should also get a health insurance covered in his salary (specially when the German state makes it compulsory to have a health insurance, then it should also ensure that all employment, even as stipends/fellowships in the academics should cover health insurance).

Sometimes EVEN German nationals are hired on such stipends/fellowships. Some authorities of the GAS might argue that PhD and Postdoc positions can be TREATED as 'Ausbildung' (training to become independent scientists). Hence one is not like REAL 'employee' yet, hence one can not be given a PROPER contract! Considering the fact that the target group for such fellowships/ stipends being highly qualified scientists (irrespective of their nationality) with a completed university studies (abgeschlossene Studium) and PhDs (promoviert)

and sometimes even Postdoc experience (Erfahrung als Wissenschaftliche Mitarbeiter), then it is DIFFICULT to understand how can such scientists be considered to be in 'Ausbildung' and not not deserve proper working contracts! This again makes the GAS among the WORST employment avenues where inspite of completed univ studies (or even higher qualifications like PhDs, Postdocs, etc) the employment seekers are not able to get proper contracts for their profession! This is a shame on the GAS to allow such mishandling of the highly qualified scientists, something which is not known in any other profession, where right after their univ studies/vocational training (Studium/Ausbildung) most of the students/trainees are able to find suitable jobs with proper working contracts (in most cases permanent/unbefristet)! We guess its time the government wakes up and creates more permanent jobs in the GAS!

Solution C:

Control the number of youngsters who begin a career in the Natural Sciences.

So first of all we need laws to not allow any fellowships/stipends etc, which do not cover health, social security and pension benefits. Once the BMBF bans all such kinds of stipends/fellowships the foundations and organizations (Stiftungen) which provide such fellowships will automatically respond and may have to end up reducing the number of fellowships, but we rather prefer few fellowships which provide all benefits like a proper contract, than many fellowships which cover less. Furthermore these VERY far too many stipends are also a cause/method how Profs/Directors are able to hire armies of young scientists, creating the HUGE numbers of highly qualified young scientists who are soon seeking proper jobs (with permanent contracts) but the GAS does not have enough jobs to offer them all. Hence by having LESSER and well-paid stipends/fellowships, we can also reduce the number of job seeking young scientists! Not surprisingly this current problem had been perceived quite sometime ago and the international community has been already busy to tackle it. Countries like USA, which not only lead the sciences also are making pioneering efforts to organize the Postdoctoral Stage of the academic career! No wonder that editorials of influential journals like Nature, Science, etc are regularly discussing the same problems* we raised and often **THEIR** suggestions are similar to **OURS** we provide here. Hence even experts acknowledge the gravity of the situation. Hence our concerns are not over-reactions or merely 'eingebildet', instead really pressing and need REAL steps within **the next 5 years***, if we want to prevent mass-unemployment of highly qualified young scientists! EU is already plagued with a 'Refugee Tsunami', the Unemployment Exchanges (Arbeitsämter) will soon be flooded with 'Tsunami of Unemployed Scientists'!

* <http://www.nature.com/news/make-the-most-of-phds-1.18915>

And it is also not that we need to re-invent the wheel, as there are already good examples like Marie-Curie Fellowships which are prestigious, competitive but also cover all benefits just like a working contract! Hence the BMBF simply needs to make laws to not allow the hiring of young scientists on any form of funding which is not covering all kinds of benefits. There might be a decline in influx of scientific talent who might start going to other countries who do not care about

this aspect of the exploitive stipends/fellowships and continue to patronize and allow stipends/fellowships to hire young scientists, but we guess SOONER or LATER all sensible nations will understand the *raison d'être* behind such a ban on such stipends/fellowships and follow suit.

FACT D:

Only research output is honored/rewarded, which is killing the importance of teaching!

Description D:

Even though that Germany is a world leader in R&D, but the current focus on R&D is often driven to the borders of obsession at the cost of ANOTHER IMPORTANT function of the academic system - Education (Bildung). No wonder the German ministry is called the Federal Ministry of **Education** and Research (Bundesministerium für **Bildung** und Forschung). Unfortunately the current German Academic System in Natural Sciences does not give much importance to the Educational part of the picture! **Only** high-impact publications are desired by both the employers (research institutions and universities) and the funding agencies. Only those academicians are considered talented who can publish well and EVERY Univ/Institute wants to have Nobel Prize winners in their department but no one care how is the quality of TEACHING? Are the students in the various Bachelor and Master courses being well educated? Are they satisfied with the teaching and mentorship of their professors and if there is at all sufficient mentorship/ guidance (Betreungsverhältnis)? But these aspects are not being given importance. Furthermore the German Universities and Hochschulen have among the WORST student:professor ratios (upto 1:100+ in some cases). No wonder that students in Germany feel their tutelage (Betreungsverhältnis) to be in among the worst in Europe. Maybe the BMBF thinks that if education is now 'free' (no Tuition Fees), then maybe the students should simply accept whatever education they get and not complain for something that they get for free! Of course the reason for this obsession about high-impact publishing is that the academic system is highly under-financed. On the other hand, R&D in the Natural Sciences cost a lot of money (which is ofcourse essential and the new discoveries and inventions drive future technologies for industry and development of the society), so the cash-strapped young academicians ARE COMPELLED to GENERATE high-impact publications (often provoking scientific misconduct), to attract 3rd-party funding to secure their position and establish a career in science (get a permanent Professorship/Directorship). Hence it is not surprise that Univ Professors/MPI Directors who prefer to dedicate more time to do research, see teaching as a BURDEN and loath their lecturing duties. Their constant greed for more 3rd-party funding to finance (their originally under-financed institutions) also causes the various Univs/Institutes to only focus on employing scientists to focus on research! But since the Universities have always been the seat of learning, they continue to enroll students at Bachelor and Master levels, but the quality of education has drastically declined as professors (who are more focused on their research) feel compelled to teach and this results in a half-hearted, poor delivery of education. This can be compared to a service being delivered at lesser quality/quantity than it should be (untergeleistete Dienstleistung).

Solution D:

Create permanent jobs which emphasize on teaching!

Even though already as long back as in 2007* the German Scientific Advisory Committee (Wissenschaftsrat) (and BMBF in 2013*) had recommended the creation of MORE permanent positions which emphasize on teaching (Lehrprofessur), this recommendations has been openly disregarded** by most German Universities! This should be strictly implemented and one can not make excuses of it all being too complicated and novel to design, plan and create! Similar systems exist in MANY other countries (like USA, UK, Scandinavian countries, etc) with a well planned career path with permanent positions like Lecturers, Readers, Associate Professors, Assistant Professors. Besides the above suggested **3 or more permanent Scientific Staff** (Wissenschaftliche Mitarbeiter) positions per Professorship/Directorship, the Universities & Hochschulen should URGENTLY CREATE at least 1 Teaching Professorships (Lehrprofessur) + 2 Lecturers per department (pro Abteilung). Ofcourse this would mean that the German State would have to provide more money, but I guess if the German State spends less meaningful avenues like on Warfare and Weapons, then there will definitely be MORE money available for useful things like Education and Research (Bildung & Forschung)!***

*https://www.bundestag.de/blob/189974/fbf3a422fa16804d604d369655a577a5/lecturer_und_lehrprofessur-data.pdf

* https://www.bmbf.de/files/stellungnahme_BUWIN_2013.pdf

** <http://www.zeit.de/2015/28/lehre-forschung-universitaet-lehrprofessur>

***Another avenue where the German State could PROBABLY save money is the Hartz IV. So before you finish reading and try to judge us, let us clarify that NO we are NOT anti-social in our ideology, and we strongly believe that every country should support those who need it, but ONLY those who REALLY DESERVE it. We strongly believe that a huge proportion of the German Hartz IV beneficiaries are simply TOO LAZY (faul) and SPOILT (verwöhnt) and this happens BECAUSE they know at the back of their heads that there is the Hartz IV with which they can survive without doing ANY work! No country should facilitate such laziness as when the population knows that I can afford not to go to work and apply for unemployment benefits, then I can as well MISUSE this facility. And we as human beings tend to abuse & misuse. So we think that **ONLY physically and mentally challenged** people should be provided such benefits! EVERYONE ELSE, irrespective of their personal problems, broken marriages, lack of qualifications, or other such CIRCUMSTANTIAL problems which occurred due to the choices (sometimes wrong) they made or due to combination of events that occurred in their lives, ARE STILL responsible for their OWN lives and hence they are themselves responsible to take care of their expenses! Hence it is UNFAIR for the hard-working part of the population to pay a part of HIS/HER taxes so that the lazy, spoilt & incompetent part of the population can enjoy HartzIV! Each one who is not mentally/physically challenged (from birth or thereafter) SHOULD WORK to earn their OWN living, thus reduce the burden on the State's Finances, hence make it possible for the State to create more jobs (for example in fields like Natural Sciences)! It is shocking if the German State thinks that its not possible to create more permanent jobs for people WHO WANT TO WORK and CONTRIBUTE TO ADVANCEMENT of Science and Technology, BECAUSE the State has to pay unemployment benefits to millions who are too lazy to work! An ideal State should rather support those who are ready to work and contribute in the form of taxes than to support those who are too lazy to work and contribute nothing to the society (ofcourse except producing kids who are groomed into future generations of Hartz IV beneficiaries due to their lazy, incapable parents who can't teach their children any better)!

We are also aware that certain factions like the Leopoldina had expressed their opposition towards the Lehrprofessur claiming that it would harm the research quality & lead to a dual-class system, BUT we argue that:

1. Firstly 'traditional organizations' like Leopoldina comprises of exactly the kind of Profs whose mind-set resembles the feudallords of middle ages. Hence they are simply opposed to the Lehrprofessur solution, because they see it as a question to their authority! They are far away from the problems of poor prof:student ratio which plagues most German Univs today and are also blind to the lack real-life problems of lack of sufficient jobs for qualified young scientists in GAS today! They are mostly retired and have made their careers, hence they hardly care about the problems of the young scientists who have to compete and survive the 2% bottleneck, which was not the case when the members of Leopoldina became professors, half a century ago!
2. Secondly the argument of compromise in quality of research is senseless, as the new Lehrprofessurs are NOT supposed to be CREATED at the COST of the Research Professurs, BUT are supposed to be ADDED new positions! If a Univ has 10 Research Professorships and had planned to creat 2 more, its stays as it is, the NEW Lehrprofessurs are supposed to be CREATED on top of those 12 existing/planned Research Professurs, hence there is no question of compromise in quality of the research as it continues as before. The Lehrprofessurs are only supposed to dedicate more hours to teaching (the job which is being neglected/loathed by the Research Professurs) hence the Research is rather going to the BETTER as the Research Professurs will have more time for DOING their research when the Lehrprofessurs take over their teaching responsibilities! Hence the Research Professurs would be thankful and work in tandem with the Lehrprofessurs who would be helping them with the teaching part!

FACT E:

The current trend of measuring success in Natural Sciences ONLY with high impact publications, is turning it into a 'publication rat-race'!

Description E:

We don't need to convince the readers that the SINGLE MOST important measure of success for a natural scientist (Naturwissenschaftler) nowadays is – HIGH IMPACT **publication!** Right from funding agencies to employers the ENTIRE system only consider publications as the MOST important factor to assess the credentials or a natural scientist to fund/hire him/her. No wonder the single most piece of advice a young natural scientist gets nowadays is '**Publish or Perish!**' Hence natural scientists are ALWAYS concerned about HOW/WHAT/WHEN/WHERE is there a CHANCE to publish. This of course leads to NUMEROUS negative impacts on **the WAY** science & publishing RUN nowadays:

1. Publishing in Natural Sciences has turned into a highly profitable INDUSTRY with large publishers like NPG, Elsevier, etc churning huge profits out of this multi-billion dollar industry, which sells scientific output (financed by tax-payers' money) to the same scientific community which generates them (also using tax-payers' money)! Although open access publishing efforts like PLOS, eLife, etc are good steps forward but still a handful companies rule the business with complete monopoly!*

*<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0127502>

2. Besides the publishing monopoly, the scientists are under CONSTANT & TREMENDOUS PRESSURE to perform (read PUBLISH), leading them to invest efforts ONLY on something that COULD lead to a publishable story! Hence ONLY such projects are pursued as a scientific goals!#
#<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2439458/>
3. Not just compromising on the goals of scientific endeavors, scientists also go ahead to publish JUST FOR THE SAKE of publishing, and often most of the publications hardly make any SIGNIFICANT contribution to the advancement of the sciences!¢
¢<http://www.garfield.library.upenn.edu/papers/hamilton1.html>
4. Furthermore the pressure of publishing causes bias on the scientists efforts, posing serious questions on the “unbiasedness” and “neutrality” of the scientific outputs!∞
∞<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0010271>
5. All of the above leading to the most detrimental impact on Science: scientific misconduct and publication of false/fabricated information!¶
¶http://www.sciencealert.com/major-journal-publisher-admits-to-fabricating-peer-reviews?utm_source=Article&utm_medium=Website&utm_campaign=InArticleReadMore
¶<http://www.collective-evolution.com/2015/05/16/editor-in-chief-of-worlds-best-known-medical-journal-half-of-all-the-literature-is-false/>
6. Hence its not a wonder that besides the false/fabricated publications, reported data is often RARELY reproducible putting the entire endeavor costing astronomical amounts of money, time, energy, efforts to a complete waste!#
#<http://www.jove.com/blog/2012/05/03/studies-show-only-10-of-published-science-articles-are-reproducible-what-is-happening>
#<http://iaj.asm.org/content/78/12/4972.full>
#<http://www.nature.com/news/reproducibility-1.17552>

Solution E:

Impose ONLY OPEN ACCESS, 'ACADEMIA run' publications and measure credential of scientists on various factors besides publications.

Hence there is an urgent need to ban all 'commercially run' publications and allow only 'academia run, open access' publications! This will lead to an end of the monopolistic rule of the handful publishing companies which control the entire scientific assessment industry! Besides QUALITY instead of QUANTITY of publications should be assessed, based on the actual quantum of contribution/advancement a given publication makes/brings to a given field of science! How reproducible the data is and how much impact it makes in terms of feedback from the community! Hence publications once published should not be forgotten as it mostly happens but be curated, followed and rated even after the publication process! This will enhance accountability, reduce misconduct & enhance publication with high reproducibility. Furthermore success of a scientist should NOT be judged ONLY based on their publication LISTS, rather also on OTHER EQUALLY important contributions to the scientific endeavor like –

teaching ability (based on student feedback), mentoring ability, ability to generate patents, ability to contribute to scientific literature (in terms of books, etc). Continuing on the Fact D, is it not a shame that the only scientific performance which is recognized with big awards and grants is high impact publications! The GAS, has no major award/recognition to value the teaching contribution of a scientist! Due to such lack in valuation and recognition, most scientists see teaching as a burden with no incentives! Instead if there were recognitions/awards for excellent teaching performances and if such achievements were also given substantial IMPORTANCE to assess the credibility/success of a scientist, it would also enable to balance the obsession of publication which currently plagues the scientific system and give teaching/mentoring their highly deserving importance!

And no WE JUST don't want to complain and nag at the MPS/GAS. We acknowledge their commitment towards world-class research, hence we are ready to dedicate the precious young years of our lives to this profession and this country, but we also don't accept that for its desire to maintain 'Spitzenforschung' MPS/GAS prefers to attract thousands of young scientists from all over the world, JUST to get its 'Spitzenforscher' and then 'DITCH' the rest. Yes of course we ACCEPT, not all of us are the 'Spitzenforscher' you WANT, but then don't invite and hire all of us and make us leave our homes, families, cultures to come all the way to Germany only to be used up a few years and then to be spitted out like crushed sugar cane (once you got the juice of our hard-work at bench) to fuel your Profs/Directors. Besides the less than 2% Professorships/Directorships you have for the 'Spitzenforscher' you should also create many more permanent mid-levels positions to provide secure jobs to ATLEAST 10% more of the young scientist that you attract annually with the cheap-stipends!

We also admire the social involvement of the MPS, for example evident from the ongoing efforts of the MPI BPC headed by the Managing Director – Prof. Dr. Herbert Jäckle, to support the refugees! But we do think that while such venues do require our involvement there are numerous matters which are in abundance and our institute could have been much better off without them. For example also during the SAB, we mentioned about how 'UNSATISFIED' we are with the quality and options for FOOD at our institute (specially with respect to the high prices)! Considering the fact that a huge portion of the almost 850 employees on campus (MPI BPC, MPI DS, GWDG, NMR I GmbH, etc) are foreigners and many vegetarians, the quality of food is terrible. It has been bad since the last few years and even though the catering was changed from the Studentenwerk & UMG it was worse and worse, but it was clearly ignored that the one thing that remained same while the caterers changed was the Head-Cook! No wonder his close relations to the Institute's Administration allowed him to even become 'Selbstständig' and take over the entire catering, while the visitors still suffer due to poor food and high prices! Furthermore recently our institute was 'decorated' with almost a dozen HUGE digital screens all over the buildings, which constantly keep displaying announcements to seminars, events, etc – things for which we already get repeated MAILS, but still SOMEONE thought lets waste some money

to buy & install fancy screens all over! We young scientists would have preferred if a few more new permanent positions were created in each Director's Group. We don't need fancy screens to feel good or be RE-reminded of seminars/events. We agree that we should be happy and acknowledge the facilities we get, like one of the Rapporteurs from the recent SAB - Prof. Dr. Ingrid Grummt mentioned that instead of complaining about the size of the 'parenting-room' on our campus, we must be thankful that we have one ATLEAST! There are so many institutes who don't have one! Hence we admire the efforts of the institute administration towards aspects like Childcare, social engagement and annual festivals like the Summer Fest pioneered by Prof. Jäckle. But we also desire more support in terms of more permanent positions, which is more fundamental and important to feed our families and kids.

After the problems & our suggested solutions, we would like to SUM UP our real-life situation:

Some of us involved in the drafting of this letter are in our late 30s and early 40s ALREADY and are still working as 'slave' postdocs under our bosses since many years or have been forced by the short-term stipends & various funding organizations which demand perpetual mobility for granting fellowships/grants (as if scientists are supposed to live gypsy lifestyles) to constantly hop from one lab & country to another! But slowly we are getting tired of this INSECURE, EVER-mobile, short-term stipends. It has already taken huge toll on our lives. Most of us do not manage to meet/find suitable partners (as our long working hours hardly leaves much free time to lead a sound & healthy private/social lives) and for those who manages to find a partner have constant problems/fights/stress in our relationships due to negligible time we dedicate to our personal lives! No wonder MANY young scientists often end up being single or paired up with OTHER scientists as the only possible partners one can meet or who can understand the reasons for the lack of free time! Is this not a matter of great pity & shame for the scientific system? The perpetual mobility expected for a successful scientific career & short-term stipends cause major negative impacts on our personal lives like - not be able to settle down with a partner (most non-scientific partners want to settle down at ONE place and can't keep hopping around the world, most of them can also not work all over the world as many qualifications for eg those typical for Germany are not internationally accepted (and vice versa many international qualifications are not accepted in Germany), often causing non-scientific partners to become unemployed during the years of mobility (which is often detrimental to their careers & also selfish from the scientific partner to expect). This is specially problematic when the non-scientific partner has a better salary (MOST of the TIMES) and thus the major source of our livelihood is lost due to such incompatibility in professions caused by the mobility (expected by the funding agencies)! Of course this often causes broken relationships/ marriages, when the non-scientific partner is not ready to give up their career, which is very much understandable, but becomes unavoidable if the scientific partner needs to pursue mobility to fulfill the grant criterion! Hence unhappy personal lives of scientists begin. Besides professional problems, mobility also causes scientists to plan personal lives like - family planning (getting kids), settling down (to feel at home and have a sense of belonging to a city/lab), gain some financial security (like buying whatever property one can

afford from the poor earnings as a scientist). And for those who are having kids its even more difficult with the whole mobility aspect, as moving countries with small kids with new schools, environments and life-styles is a highly stressful.

In short we feel afraid/insecure that inspite of making all the above sacrifices (NOT USUALLY DEMANDED by other professions), we will one day be in our mid 40s, without a permanent position (not even Scientific Staff), hence UNEMPLOYED but OVERQUALIFIED for the rest of the jobs, and have a FAMILY of kids and an unemployed non-scientific partner (who sacrificed MOSTLY her/sometimes HIS career for our constant stints of “mobility” with the hope to BUILD my career)! We hope that the readers of this letter can understand the gravity and seriousness of our concerns and will be convinced to take necessary steps to improve the situation of work and life of the young scientists in the GAS!

Before we end, we agree that many of our statements might have been perceived as purely emotional outburst & frustration laden criticism to certain readers (Univ Prof/MPI Directors) who might find them uncomfortable, but then we are human after all and we don't think there is anything wrong in freely communicating human problems and issues with other humans with the hope of being humanly heard and the rightful to be done in a human way! Furthermore if someone feels uncomfortable then it shows that there is something WRONG about the whole issue and it causes them to be uncomfortable while deep down in their hearts they know well that there is truth in our raised points and its not right the way they are being allowed to go on as now! Not just the raised problems, some readers might find many of the suggested solutions as **restrains on/questioning their authority**, which shows that they DO ADMIT/FEEL that they DO wield some sort of authority/power/sense of control over the issues which is probably not the way science should be RUN! And just because Science has grown into this ugly affair as depicted above, with 'big-shot' Profs/Directors running the show & jeopardizing the lives of millions of young scientists without any control (till now), does not mean that things should continue to run in the same chaotic, UNSUSTAINABLE way. ENOUGH is ENOUGH! Its time to change the system for greater good of the scientific community. Science ORIGINALLY was the endeavor to unravel the secrets of nature and generate technological advances for the betterment of this world and NOT an industry monopolized by paid publishing of 'PUBLISHABLE research' often “generated” by the exploitation of young scientists paid on short-term stipends/contracts and expected to constantly hops labs, until mid 40s before they end up without a permanent job to be thrown out of the GAS! Please do the necessary to make Science the holy discipline of pure reason based on the pillars of genuine curiosity, reproducible experimentations and freely shared knowledge!

Thank you for reading and feel free to share with all those who might be relevant!

Sincerely,
A random bunch of 'young scientists' from the MPI BPC.