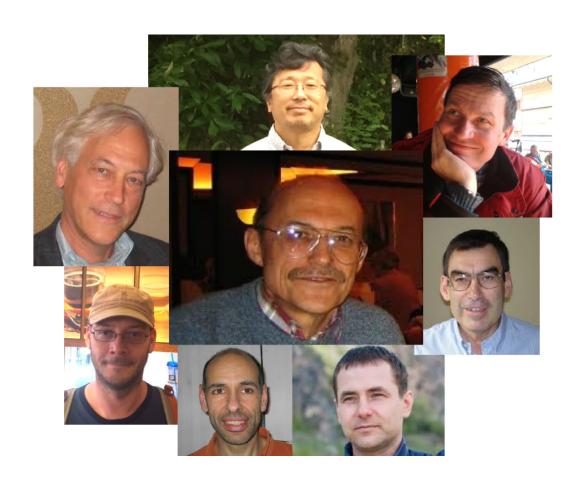
International Association of Mathematical Physics



News Bulletin

July 2015



International Association of Mathematical Physics News Bulletin, July 2015

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Cover picture: Editorial board members of the IAMP Bulletin, 2009-2015.

Center: Valentin Zagrebnov. Clockwise, from the top: Masao Hirokawa, Manfred Salmhofer, Rafael Benguria, David Krejčiřík, Jan Philip Solovej, Robert Sims, Evans Harrell.

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News Bulletin (International Association of Mathematical Physics)

Leaving the Board

by Valentin Zagrebnov (Editor of the IAMP News Bulletin)

Dear reader,

You hold in your hands (or watch on your screen) in a certain sense the "jubilation" issue of the IAMP News Bulletin July 2015. After two terms (6 years) the current chief editor and editorial board are ready for rotation and for leaving the board of the IAMP News Bulletin, to make room for a new team. The next, October 2015, issue will be produced by a new editorial team and by a new editor-in-chief.

It is how all started.

Six years ago, at the XVI-ICMP Prague 2009, Pavel Exner formulated the idea that it was a time to open "a new page in the IAMP-Bulletin life". The aim was to make the Bulletin more useful, attractive, and interesting to read. When he shared this idea with me and proposed that I be the Editor I took it with a mixture of a naïve enthusiasm and a serious doubt since my journalistic experience was zero. Decisive for the launch of the Bulletin and for its development till 2012 were Pavel's regular forewords. They were interesting and useful for the readers as well as encouraging for the whole Editorial Board, which feel attention to this new project from the President's side. I also must admit that at that time I leaned some basic things from my son graduated from the Marseilles School of Journalism.

A challenge.

To fill in the News Bulletin by "news" one needs first to collect them before to add pictures and to transform the text into a readable message in English. All these were not possible without a solid Editorial Board. The first of a new issue in October 2009 was relatively easy to prepare. The main news come from the ICMP in Prague, together with reports about satellites, and with announcement of the coming XVII-ICMP in Aalborg. Meantime I succeeded to take my first interview! With enormous help first of all of David Krejčiřík, and then of Evans Harrell, Masao Hirokawa, and Jan Philip Solovej we succeeded to publish our first issue in October 2009 that you can compare with just the previous one (July 2009):

http://www.iamp.org/bulletins/old-bulletins/200907.html http://www.iamp.org/bulletins/old-bulletins/200910.pdf

It works!

During the period from October 2009 to July 2012, the first Editorial Board succeeded to work synchronously and efficient to "find" enough news and articles to publish. With David I was permanently discussing ideas created within the Board. He was responsible to transform them (after attentive spell-checking by Evans) into the final .pdf file for readers. Masao helped very much with a series of publications concerning the Mathematical Physics community in Japan. Jan Philip (the IAMP secretary) ensures the news from our Association. Very useful was a new initiative by Pavel Exner. The IAMP News Bulletin and the News Letters of the European Mathematical Society concluded agreement about exchanges of publications. Then in July 2012 the ISSN number was attributed to the IAMP News Bulletin, officialising it in the media space. Starting on the October 2012 issue with a help of Elliott Lieb the Copy-right agreement with our authors was formalised.

Rotation 2012.

A new Editorial Board came to the power after the XVII-ICMP Aalborg 2012. Fortunately Manfred Salmhofer took the charge of David Krejčiřík. As David he constantly helps me in all subtle moments of running Bulletin. It is due to Manfred now on you can admire the Bulletin in the screen version. Also Robert Sims has joined us. In a tight cooperation with Evans he made the spell-checking procedure quicker and more confident. Rafael Benguria arrived full of new ideas that helped very much with realisations of several nice projects and publications.

Go ahead!

I would like to thank very much all members of the two Boards 2009-2015 who made possible to keep the IAMP News Bulletin in the present good health. Some of publications in the Bulletin are quoted in the scientific literature; others are reproduced in the EMS News Letters. There is even two of them translated in a Chinese edition. My modest experience confirmed a triviality: the Bulletin cannot exist without help and without a feedback from the readers. They expressed in the form of articles with popularisation of personal activity, of interviews, of news about events, conferences or book publications. Note that the majority of the pictures we used in the Bulletin are due to our readers.

On behalf of the two Boards 2009-2015 I would like to wish a renewed Editorial team and a new Editor-in-Chief a successful continuation!

Valentin	Zagreb	onov
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¹see back page of this issue

Interview with Martin Hairer

ULF PERSSON (Chalmers University of Technology, Göteborg, Sweden)

UP: This is a question I always ask the Fields medalists. Were you surprised getting the medal?

MH: I cannot very well answer 'NO' to that question, but when I got a message from Ingrid Daubechies at the IMU about a convenient time for me to take a call, I more or less understood what it was all about. And I admit that I had heard rumors to the effect that I was being considered.

UP: But you were never on any official short-list, such as getting a medal from the EMS?

MH: No. The work for which I was rewarded mostly took place in the last four years. I was awarded the Fermat prize though, which has done a remarkable job at predicting Fields medalists over the last few years (4 out of the last 6 recipients).

UP: How do you think this will affect your life?

MH: Not too much I hope, but invariably it will. I still hope that I will be able to pursue mathematics as I always have done and not simply become some sort of poster boy for mathematics...

UP: .. pinned up on the walls, you mean. After all the original intention with the medal was to encourage young people to keep up the good work.

MH: Exactly.

UP: But let us go back to the beginning. What is your background? What were your parents doing?

MH: My father was actually a professor of mathematics in Geneva. A numerical analyst as a matter of fact. And my mother was a primary school teacher but gave that up when she had children. I have two siblings by the way.

UP: Geneva. That means that you grew up in a bilingual setting. Speaking German at home, and French otherwise.

MH: That is true.

UP: So when did you get interested in mathematics?

MH: Early on. I was always interested in mathematics, and of course through my father I got curious about it as very young.

UP: Were you really interested in mathematics? There is a difference between being very good at mathematics, effortlessly catching on the basic elementary stuff, as most of

our colleagues did, and discovering what mathematics is all about and getting a glimpse of its true fascination.

MH: I think I did that early on. I asked my father what a differential equation was, and he explained it by drawing arrows on a piece of paper trying to finding what I later would learn to be integral curves. Then we had a calculator on which you could program some simple graphics, and I programmed and played around with it.

UP: How old were you then?

MH: I was about eleven I think.

UP: This is definitely something that was not available to me when I was a child. It meant that you learned to program.

MH: Yes it did.

UP: Programming is very seductive, unlike mathematics you never get stuck.

MH: This is not quite true, fairly early on I realizes that programming did encounter obstructions due to the limitations of language, which I naively did not appreciate at first. I learned to program in Pascal and there was e.g. no way of dynamically updating function pointers.

UP. This is undoubtedly true, but this is a high level of frustration, I meant more in the usual run. When programming you always get immediate feed-back, which you do not get in mathematics.

MH: This is true. And in the early days of programming on personal computers. I am speaking about the mid and late 80's...

UP: .. Funny this is the time I learned to program too. Although there is an age difference of a quarter of a century between us, we apparently learned to program at the same time...

MH:...and then you could write simple code that produced graphics as good and sophisticated as was commercially available.

UP: And this is not true today.

MH: Definitely not, the learning curve is much steeper. Back then you could be self-taught and self-contained. Now you have to do it much more modularly, invoking already available programs.

UP: This definitely takes the fun and charm away from it. Programming can be a very good pedagogical way of implementing mathematical ideas, provided you do it from scratch. If you just push buttons invoking already available things, it will of course be much more efficient, but you will be bored. It is like doing mathematics by combining theorems which you do not understand but treat as black boxes. Good for getting on, and getting results, but ultimately self-defeating as far as mathematical enjoyment is

concerned. But returning to encountering mathematics. When I was young, it was classical Euclidean geometry that triggered my interest. I was fascinated by the way you could reason logically and compellingly. In many ways a moral insight. Did you have anything of that? It has been removed from Swedish curricula since a long time.

MH: If you mean proving that different angles are equal, using the congruence theorems and such things, we were exposed to it, but it was never pursued further.

UP: So it did not make too deep an impression on you?

MH: Not really.

UP: Programming is about the same thing. Implementing small logical steps.

MH: But what really made an impression on me was Cauchy's residue formula. I was very impressed, it seemed to come out of the blue. Before when studying mathematics, there were no surprises. You more or less understood what was coming and how to prove it. But this was very different. So totally unexpected.

UP: It is only when you get to analytic functions that the element of magic enters mathematics, when you realize that there are very deep connections.

MH: This is true.

UP: What were your interests besides mathematics?

MH: Physics and computer science. I actually studied physics and wrote my thesis on physics, but really it was more mathematical, and my thesis advisor was more of a mathematician in spirit.

UP: You did not pursue computer science?

MH: No, as I indicated to you, in the past amateurs could produce codes that provided graphical user interfaces on the commercial level. I simply imagined that I knew everything there was to know, and saw little point in starting all over again. I know in retrospect I was being unfair.

UP: Perhaps, but not really. There is a much richer culture in mathematics than you can find in mere programming, in fact I suspect that early on your interest in programming was provoked by mathematics. Mathematics does provoke so many excuses for programming, making it tangible.

MH: That is true. Still I did consider a career as a commercial programmer. I knew it would provide a good salary and allow me to live a very comfortable life.

UP: As we discussed. You do not get stuck in programming the way you do in mathematics. The challenges can always be met.

MH: The academic world struck me as rather harsh and I worried that I might not make it. I decided to give it a chance. I applied for a post-doc grant and I used the money to

come to Warwick where I had previously attended a special year devoted to stochastic partial differential equations. In fact Warwick is about the only place in England such things are being done.

UP: Yes I know about those special years. They have been arranged for almost fifty years I believe.

MH: Yes, more or less since the university was founded. It is one of the very best universities in England as well.

UP: And you got stuck there.

MH: I would not put it that way, but it is quite interesting how I got to end up there.

UP: You married a UK woman?

MH: More or less. My wife is actually of Chinese origin, but she did her PhD in England on an exchange program that at the time during the late eighties was rather unusual. She also spent time in the States before returning to UK. But another reason was that my research went very well, as it turned out I and a friend ended up in some kind of competition: what we were doing was also of interest to other people, and there was a precise conjecture many different teams wanted to prove, many of them quite distinguished. But we had a good idea and felt that we had an edge.

UP: So the competition stimulated you? This is not so common in mathematics, where people tend to fan out, according to the image formulated by von Neumann, and there often is no one else doing what you are trying to do. It makes for peace and quiet. I suspect that the physicists are far more focused.

MH: They certainly are. The main thing about the competition was that it certainly made us finish up much faster than we would ordinarily have done without this pressure. And then it caused a minor sensation and we were hailed as coming young stars.

UP: In other words your luck was made. I guess this was the reason you got tenured only three years after your Ph.D.

MH: Certainly it was.

UP: Competition does provide a measure of objectivity of standards, which may not always be present in mathematics. It is via competition you can measure yourself against your peers. Many mathematicians have been drawn into mathematics due to early successes in mathematical competitions and olympiads.

MH: I never competed in school. I would not have done well I believe. Solving those problems seem to hinge on some clever combinatorial tricks, which I would never have come up with. I simply do not feel comfortable with that kind of mathematics.

UP: Solving problems under time pressure and doing actual research is quite different. The difference between a sprint and a marathon, and it is actually remarkable that the correlation is as high as it is.

MH: That is true. Competition problems are also a bit artificial and combinatorial, as I just said, while real research engages in more natural and deeper-going theorems.

UP: What kind of mathematics do you dislike?

MH: Dislike?

UP: Yes, dislike.

MH: I do not dislike any mathematics, it is rather that I do not feel equally comfortable with all kinds of mathematics.

UP: Such as?

MH: Graph theory, group theory. I just would not be able to come up with proofs. I have of course a general overview, but with many kinds of mathematics it is just very superficial.

UP: So your mathematical career has followed a straight path since you were ten? Do you have any other interests besides your scientific?

MH: I would not put it that way. As to other interests I am a bit at a loss. I like to hike, I like to listen to music.

UP: What about literature?

MH: I read quite a bit, mostly for pleasure and entertainment, nothing serious, only very light stuff.

UP: So you do not want your reading to interfere with your mathematics? So you only read...

MH: ... trash you mean. Sure. And I do not know how to play an instrument, which I regret very much. It would have been nice to be able to play the piano. But this is probably too late now.

UP: Could be. Learning to play an instrument involves a lot of drudgery probably having little to do with music per se. A kind of muscular coordination training best engaged in when young and malleable. But why do you think that mathematics and music are so often seen as related?

MH: For one thing there is the physics of sound that lends itself to a mathematical treatment.

UP: Pythagoras and all that. But this is not what we really have in mind.

MH: Of course not. Music is the most abstract of arts, and by far the most structured.

UP: Yes, especially as it is based on recurring themes that are subtly changed, just as in mathematics, where themes are never mechanically repeated. Music that is algorithmically generated is boring.

MH: True.

UP: How come music is never expected to be applicable, while mathematics is. And why do you have to be a mathematician to appreciate the beauty of mathematics, but you can emotionally at least enjoy music even if you cannot compose.

MH: I am not so sure about non-mathematicians being unable to appreciate mathematics after all. But it is true that music attracts a far greater audience than mathematics. I guess it has to do with the threshold level of mathematics.

UP: Do you feel that mathematics has to be ultimately applied to justify itself? When the virtues of mathematics are sung to the general public, it is always the applications that are lauded. The Korean President referred to animation in her speech. Personally I suspect that people are bored by that. Fermat's theorem and Perelman engage the public imagination much more than applications to say transmission between mobile telephones.

MH: I am definitely not saying that mathematics has to be applicable to be justified. In that sense I identify myself as a pure mathematician thinking of mathematics as an art. Also I do not believe that there is a sharp distinction between pure and applied mathematics, there is a continuous spectrum, on which an individual may over time occupy different locations...

UP: ... except, of course, social. They usually are at different departments...

MH: ..Except not at Warwick at least. This is one of the things for which I approve of my university. It is of course true that the kind of mathematics I do, with its ties to probability theory, is considered quite applied, the reason for which is obviously that it grew out of physics.

UP: This is true of analysis in general, while many of the harder problems of analysis concern subtleties of infinite sets, having no concrete counterpart in the real world.

MH: Quite true. As to the public appreciation of mathematics, Fermat's theorem is something that people in general, or at least people with some interest in mathematics, are able to understand.

UP: Let us change tack. Do you think that there are too many people going into mathematics?

MH: I do not see how this is really a problem. True, too much is published in mathematics, but I do not see how one can do anything about it. This is the way the system works. Young people need to show something in order to get ahead and get a job.

UP: One could make it harder to get papers published

MH: Publishers would not like that. They thrive on greater and greater volumes. I do not see how it can be changed. And not that it is such a a big problem either, if I am to be honest.

UP: You think that quantity by itself can be a good thing?

MH: In my field of analysis, you have results which are true under certain conditions. What those conditions are cannot be fixed in any clean canonical way, as maybe the case in other fields of mathematics. If you change the conditions the results become subtly different. There certainly is a great value in exploring this systematically, and to do so, you really need a lot of people working. Most of the results obtained may not be interesting at all, but you never know what you may come up with.

UP: This ties up with mathematics becoming more and more of a big science, something the funding agencies definitely would appreciate.

MH: Of course they do. Big projects are what they are comfortable with. It makes it much easier to give money for one thing. Another tendency which I very much deplore is to identify winners and shower them with money, while others do not get anything at all. A clear case of winners take it all. I can see that this system may have some relevance to big science when a project needs a lot of resources and you have to prioritize in order to maintain critical masses, but in mathematics? It is so different. Pure mathematicians do not need much money, only enough to keep them comfortable, not having to worry about basic needs, such as going to meetings, which you may find interesting, or to invite people whom you want to talk to and learn from. We are clearly talking about peanuts.

UP: Could it be possible that the forms of mathematical research will change, partly under the pressures of funding. That it will be more like in big science when there are large projects involving a lot of people and with a definite hierarchy when most people are simply told what to do? You are good at a certain type of combinatorial arguments, solve this! Maybe many mathematicians might find this a relief not having to take personal responsibility for their research.

MH: As to a big project the only thing I know of is the classification of finite simple groups, although Polymath provides a systematic attempt to pool the efforts of many to a common goal, where everyone puts in their piece of the puzzle, but without the hierarchy you are referring to.

UP: As one of my colleagues put it. In other fields graduate students are an asset, in mathematics a liability.

MH: Yes, you have to come up with a good problem for them, and more often than not solve it. As to large projects it is good for somethings, but when it comes to the creative breakthroughs in mathematics, the kind of things we referred to coming out of the blue, this is solely the result of individual efforts.

UP: Another danger with this change of the traditional culture is that mathematics may be diverted into ways that are not intrinsically interesting from a mathematical point of view. As an example take the calculations of the shapes of complex molecules in life sciences. Those shapes can in principle be derived from basic quantum physics, but it seems that this will have to do more with simulations than mathematical stimulation.

No global understanding. Is there a danger that mathematics will run out of simple but powerful ideas and become inhuman, in the sense of being inaccessible to the individual mind.

MH: It is true we mathematicians prefer to understand why something is true, not only being told, using some complicated verification. But this does not only occur in applied mathematics, but also in pure, I think of the notorious computer proof of the four-color problem from the 70's. The theorem is true, just because a computer has checked a vast number of special cases. That part of the proof gives no insight. As to your worry about running out of new exciting things, this is far from imminent. I am thinking in particular on the recent results on sparse matrices which was presented here in Seoul at the congress.

UP: Have you ever read a math book from cover to cover?

MH: Coming to think of it, I think only once or twice, mostly when I was a student. A good writer of a mathematical book knows this of course, and writes in such a way that it can be disassembled into small self-contained parts

UP: We discussed before the impossibility of giving definite formulations to theorems. What is important of a result, is not any of its various formulations but the idea that lies behind it. You cannot treat a theorem as a black box. But ideas can never be precisely formulated. You need to read between the lines.

MH: I am not so sure about that. I think one can convey ideas, but it is true it has to be done obliquely. You can present them many times, subtly changing the formulations, saying the same thing over and over...

UP:...this ties in with the often touted opinion that mathematics is something you get used to. You may not really understand what you are doing, but believe you do....

MH:...another very important thing is to present the instructive example. The specific example conveys the general idea without having to formulate it. In my talk I gave an explicit example, did you go to my talk?

UP: No, I was unable to do so. In the same vein it seems that the most effective ways of conveying mathematical understanding is through personal conversation. The time honored method since the beginning of human time. Why is that really?

MH: It has to do with the pacing, the possibility of direct interaction, you can ask questions, pictures can be drawn. Pictures are very important, although crude and specific they convey more than a thousand words as they say.

UP: Proofs, when written down are formal, although of course never adhering to the standards logicians may want to impose. In that sense they provide a detour when it comes to communication. How do you read proofs, or do you at all?

MH: When I encounter a result my first reaction is can I prove this myself, and I try. Usually I see how it is being done, but occasionally I get stuck. I look for how

that difficulty is treated in the proof, so in effect I am successively bisecting the proof, zooming in on the crucial point (there could of course be several). So I either get it, or discover that the proof is wrong.

UP: This ties up with how to present mathematics to an audience. What do you think of this modern fashion of power-points, beamers and all what they are called. I find them flashy.

MH: They certainly are flashy. I prefer the blackboard of course, but in a situation as here at the congress, you have no choice. Using a blackboard presentation you do not really have to prepare, if you see what I mean, also you can change your presentation in mid-air, you can draw pictures spontaneously. Also in my published work I try to include as many pictures as feasible.

UP: How do you draw them? Personally I taught myself PostScript.

MH: I used to program in PostScript myself, or rather I generated postscript code writing in C++. Now I have adopted TikZ, developed by the same guy who invented beamer. It makes the interface with text much more natural, you do not need to keep separate files.

UP: Another disadvantage with this, is that the speaker becomes more and more superfluous, the talk becomes a movie, and the speaker can join the audience. In other words there is a lack of presence, and presence is what a personal conversation has. But I would like to pick up on a thread we lost some time ago. Time is linearly ordered, but structures of ideas are not, which is part of the difficulties of conveying mathematics in time. In the past there was not this pressure to publish. What is better for the ordinary mathematical graduate student. To study and learn something which is well-known but interesting, or to do something new, which even if original is uninteresting?

MH: For the sake of culture, the first is obviously to be preferred. But it is hard to predict what is interesting, just as it is hard to predict what may be applicable.

UP: But in many cases a thesis, or more generally a typical paper, may just be a pointless technical exercise the purpose of which is solely to satisfy bureaucratic demands not to be read and pondered.

MH: As I already said, this is the way the world works, and there is little we can do about it.

UP: In the past, there was the possibility of being a high-school teacher. Most Ph.D. in mathematics in Sweden in the first half of the previous century ended up as high-school teachers. Weierstrass was one for a long time. It was a prestigious position.

MH: Not anymore. Times have changed. True, I know personally a woman who was very good and now works as a high-school teacher in Switzerland.

UP: Finally, to return to a theme we touched upon earlier, what motivates you to solve problems? Obviously not money. There can hardly be any more difficult way of earning a

million dollars than by solving one of the Millennium problems, even for mathematicians. Could it be fame?

MH: Money certainly not. As I noted we have modest needs and they are usually met. And as to fame, I've got my fair share of that now.

UP: So we come back to the love of mathematics, the sweetness of the challenge, and something most people simply cannot understand.



Martin Hairer

Editorial remark. This article was published first in the Newsletters of the European Mathematical Society, No.94, December 2014. We thank Lucia Di Vizio (Editor-in-Chief) for his permission to reproduce the article in the framework of the IAMP News Bulletin – News Letters of the EMS exchange programme.

50 Years of Communications in Mathematical Physics!

by Arthur Jaffe (Harvard)



Arthur Jaffe, the Landon T. Clay Professor of Mathematics and Theoretical Science at Harvard University, studied at Princeton and Cambridge Universities, starting in experimental chemistry, transitioning through mathematics, and ending in mathematical physics. He has been on the faculty of Harvard University since 1967, and has served as President of the International Association of Mathematical Physics, President of the American Mathematical Society, and Chair of the Council of Scientific Society Presidents. He was a founding Member, Director, and first President of the Clay Mathematics Institute. He hears the mathematical physics community speaking with one voice.

This summer marks a milestone in the history of our subject: the first issue of Communications in Mathematical Physics appeared just fifty years ago! This remarkable initiative originated with a small group of researchers who sorely felt the need for a journal that specialized in mathematical physics. Thinking back it is hard to imagine how our subject would have evolved so coherently without this top-quality, high-profile journal.

A key person in the founding of CMP was Res Jost in Zürich. He believed in the need for a journal in which physics and mathematics were both central. Jost was a friend of Konrad Springer, heir to the family dynasty that became famous for publishing outstanding scientific books and journals. In those times, personal connections and a close camaraderie led to many good developments. Res Jost, Jr. described to me how Konrad Springer met his father in the Josts' new home in Unterengstringen (a Zürich suburb) to discuss the possibilities for a new journal. One can imagine that Hilde Jost served them her wonderful Wiener Schnitzel! Through Jost and Springer the dream became reality.







Klaus Hepp and Rudolf Haag in Zürich, 2004

The algebraic quantum physics school with Rudolf Haag, Daniel Kastler, Nico Hugenholz, and Huzihiro Araki was extremely active in discussing the need for such a journal. Everything about CMP in the early days could be thought to be in analogy with building a family—based on lots of love for mathematical physics as well as close personal ties among the principals. Res Jost asked Rudolf Haag to join him, and he was delighted. Sometime before the journal appeared, Jost decided that he could not be heavily involved, as there were other demands on his time. But he was sure that with Haag as Chief Editor the journal would be a success. And he was right!

Haag built the initial editorial board from his friends: Nico Hugenholtz, David Ruelle, Laurent Schwartz, and Abe Taub. They not only covered a wide spectrum of mathematics and physics, but they also brought prominence to the journal from the start. And what does one find on page one, of issue one, of volume one? It is a paper by Sergio Doplicher about "An Algebraic Spectral Condition." This short work (begun while Sergio was a student visiting I.H.E.S) is still relevant fifty years hence.



First Author: Sergio Doplicher (in Siena, after 36 years)

Rudolf Haag described that his first job was to see that there was enough outstanding material to publish; quickly there was too much! I first learned about CMP during the visit of Rudolf Haag to Arthur Wightman during 1964, when I was a student at Princeton. Haag spoke about the plans for the journal, and advocates spread the word enthusiastically throughout the town. As a result, I submitted a paper on estimating the divergence of perturbation theory, and was overjoyed that it appeared in the second issue!

As with most new things, the start of CMP was very special. The mathematicalphysics community was small, and almost everyone (at least in Western countries) knew each other. Life was very informal compared with today. David Ruelle described the situation for the journal: "There was little bureaucracy, one did not have to have referees. If I liked a paper, then I wrote to tell the author. If I did not like a paper, I quoted a sentence or two nominally written by a 'referee'." This method worked, and the journal flourished without complication.

Many outstanding papers came to CMP. Of course in the early years there was a major representation of works on algebraic quantum theory. In a different area, the groundbreaking paper by Ruelle and Takens on turbulence and strange attractors also appeared in CMP. Today it is hard to believe that Ruelle-Takens work had been rejected elsewhere. Luckily Ruelle was an (original) editor of CMP and accepted the paper himself. He described this in his book *Chance and Chaos*, along with some interesting reflections on how journals function, and why it is not always easy to publish exceptional work.

Other work was never submitted, as I know from personal experience. One of my best papers proved stability for the renormalized, quartic interaction (in a finite volume of three-dimensional space-time). It took several years to obtain this result, jointly with Glimm. We introduced a new method (phase-cell localization) to study successive localization scales. After giving a seminar on this work in Princeton, I explored with Arthur Wightman, who was a CMP editor, the possibility to submit the paper to him. As interesting as the results were, Arthur thought that our paper as envisioned would be too long and technical for CMP. So not wanting to cause a problem, when the paper was finished we sent it elsewhere.

Continuity

Over its fifty years, only six chief editors have been responsible for CMP. After Haag steered the journal for its first eight years, it had been planned that Jost would be his successor. But Jost suffered a heart attack in 1972, making it impossible for him to take over. Klaus Hepp stepped into the gap and Jim Glimm followed, each for about three years. My term lasted almost twenty one years. Then Michael Aizenman served for twelve years, and presently the chief editor is Horng-Tzer Yau.

In parallel to the editorial board, the responsible person at Springer-Verlag is called the managing editor. Originally that was Konrad Springer, but as the journal developed it became the responsibility of Hermann Meyer-Kaupp. For a long period, CMP preserved its pioneering quality, but Meyer-Kaupp seemed to worry in the early 1970's that the focus of the journal might be too narrow.

Luckily Wolf Beiglböck, himself a mathematical physicist at the University of Heidelberg, took over as managing editor about that time. Little is known to persons outside the publishing company about the impact that the managing editor can have on a journal. So I want to emphasize that our community owes an enormous debt to Wolf Beiglböck for the positive role that he played 'behind the scenes' at CMP. From the beginning of his time as managing editor, until his retirement, Beiglböck acted as a champion for CMP within Springer-Verlag.

One thing that I know he did, year after year, was to negotiate to keep the price per page of the CMP low in comparison to other Springer-Verlag journals. And an important

breakthrough was to convince Springer-Verlag to have a contract with IAMP allowing them to sell very highly discounted subscriptions through the IAMP for the personal use of members. Before the advent of the internet library, these private subscriptions became popular and provided a real convenience to the community, as well as loyalty to the journal. After Wolf retired, the journal passed to Liesbeth Mol, and presently it is managed by her successor Aldo Rampioni. Both of them have continued the policies to make the journal widely available, now also for electronic subscribers.

My Personal Involvement

For the remainder of this essay, I shall discuss my personal involvement with the journal. I joined the editorial board in 1976, but when Wolf Beiglböck asked me in 1977 to take over as chief editor, it seemed daunting. Nevertheless I wanted to attempt to do what I could to help the community.



Jim Glimm and Arthur Jaffe in Cargèse, 1979

I travelled in Europe that winter and visited Rudolf Haag at DESY in Hamburg. We discussed the journal extensively, and how he might envision its future. While Haag remained an editor of the journal, he had not been chief editor for six years. Yet he was

key to consult, as I wanted to ensure that the traditions of the journal would continue. As a friend of Hepp and of Glimm, of course I spoke with them as well.

I also went to Heidelberg to see Springer Verlag, where Wolf Beiglböck was a generous host. We discussed the fact that I wanted to attempt to broaden the scope of the journal, both in the direction of physics and also of mathematics. While in Heidelberg I also met the production manager Walter Doll, who was so important to producing a beautiful looking journal with an impeccable quality of typesetting. The emphasis and love for quality came not only from the editorial board, but also from the publisher who had many loyal adherents.

Initial Moves

At Harvard we had a successful seminar that involved both researchers from mathematics as well as from physics. This reached across the boundaries between the subjects, and centered on mathematical physics. I had the goal to attempt to bring this spirit into CMP.

In order to broaden the reach of CMP, I decided at the beginning to add five new editors, and to reorganize the advisory board as an attempt at outreach. In that spirit, I suggested Édouard Brézin, Konrad Osterwalder, Barry Simon, and Yasha Sinai as editors, and that David Ruelle rejoin the board. I asked Michael Atiyah, Gerard 't Hooft, and C.N. Yang to become advisors. Soon afterward, I added Stephen Hawking and Shing-Tung Yau as advisors, both of whom became editors about one year later. And shortly Alain Connes, Michael Herman, Jürg Fröhlich, Tom Spencer, and others joined the editorial board.

As a second initiative I encouraged the editors to be active in soliciting papers. I did this myself, but once got into trouble. For in CMP it is important to be clear about "what you know" vs. "what you think you know." The referee of a paper that I solicited from a physicist, pointed out a mathematical problem. The beautiful picture in the paper depended on an unproved existence theorem for a certain linear PDE. Of course everyone believed that PDE had a solution. And once the specific question had been clarified, the existence proof appeared rapidly in a paper by a mathematician. The problem was to convince the reluctant physicist author to change his paper to state that the question was actually open. In the end, luckily, that was not so difficult.

Editorial Meeting

The first issue published during my term as chief editor appeared on my birthday, December 22, 1978. Not long afterward, I organized my first meeting of the editorial board during the 1981 IAMP Congress in Berlin. We had a very pleasant dinner in a park restaurant where we also discussed the present and the future of the journal.



Dinner meeting August 13, 1981 in Berlin at the "Chalet Suisse, das Restaurant im Grünen": Werner Ehlers, Joel Lebowitz, Jürg Fröhlich (partially hidden), Misha Polivanov, Elliott Lieb, Jim Glimm, Kurt Symanzik, Jean Ginibre, Huzihiro Araki, Tom Spencer, Arthur Wightman, and Yasha Sinai. Rudolf Haag and Konrad Osterwalder were there, but they do not appear in the photo! I took the picture.

There was discussion about "What is mathematical physics?" and "What are the standards for CMP?" I had the view that it was unnecessary for all CMP articles to prove theorems. I would be happy if an important new idea in physics first appeared in CMP. However, every paper in CMP should be precise about stating whether its contents were theorems or conjectures.

Haag Celebration

One of the first things I did as chief editor, was to suggest to Wolf Beiglböck that we invite Res Jost to edit a special issue of CMP dedicated to the 60th birthday of Rudolf Haag. This appeared as Volume 85, Number 1, and was published on August 17, 1982. Not long afterward, Rudolf visited Cambridge to give a seminar. We took this opportunity to hold a small dinner to commemorate the occasion with friends of Rudolf in the private dining room of the Harvest Restaurant (owned at the time by architect Ben Thompson, who designed the building). On that historic occasion, I presented to Rudolf a leather-bound copy of the special issue.



Dinner in 1982 at the Harvest Restaurant in Cambridge, Massachusetts to celebrate Rudolf Haag and CMP: Joan Glashow, Barbara Haag, Rudolf Haag, Sheldon Glashow, Arthur Jaffe, Barbara Drauschke, Raoul Bott, Phillis Bott, Klaus Hepp, Konrad Osterwalder, and Walter Kaufmann-Bühler (who served as the scientific liaison in the New York office of Springer-Verlag).

Shortly afterward I wrote a letter to Konrad Springer starting, "On September 27, 1982 we had a small dinner in Cambridge, Massachusetts to celebrate Rudolf Haag's 60th birthday and to officially present him with Volume 85, Issue 1 of CMP." This letter also gave an opportunity to reaffirm to the publisher that CMP was regarded in the

community not only as a leading journal in mathematical physics, but also in physics and in mathematics.

October 14, 1982

Dr. K. Springer Springer-Verlag Zeitschriftenabteilung I Postfach 105 280 D-6900 Neidelberg Federal Republic of Germany

Dear Dr. Springer,

On September 27, 1982, we had a small dinner in Cambridge, Massachusetts to celebrate Rudolf Haag's sixtieth birthday and to officially present him with Volume 35, Issue 1 of Communications in Mathematical Physics. This issue was dedicated to him on his birthday in recognition of his position as the first chief editor and as one of the founders of the journal. I put together the special issue in collaboration with Res Jost, the other moving force in establishing CMP.

Three of the four chief editors of the journal attended this dinner, as recorded in the enclosed photograph. I thought you might also be happy to know that Communications in Mathematical Physics is now regarded as the very best journal in its area, as well as one of the most important journals both in the mathematics world at large and in physics at large as well.

Yours sincerely,

Arthur Jaffe Chief Editor

Enclosure

P.S.-Photograph from left to right: Mrs. Clashow, Mrs. Haag, Rudolf Haag, Sheldon Glashow, Arthur Jaffe, Barbara Drauschke (editorial assistant for Communications in Mathematical Physics), Raoul Bott, Mrs. Bott, Klaus Hepp, Konrad Osterwalder, Walter Kaufmann-Bühler (Springer-Verlag).

cc: Professor W. Beiglböck Mr. W. Doll Mr. W. Kaufmann-Bühler

Letter to Konrad Springer, October 1982

We had many other editorial meetings. I recall them during IAMP meetings in London (at the Oxford and Cambridge University Club), in Marseilles (at a nearby restaurant), and in Paris. We had a meeting in Princeton (at the Institute for Advanced Study), and other places. We took advantage of summer schools with several editors attending. For example there was a meeting in Les Houches and a wonderful dinner in a Corsican restaurant near Cargèse, during a long Corsican summer school.



CMP Editorial Dinner near Cargèse, Corsica during a Summer School in 1987 Back Row: Raymond Stora, Krzysztof Gawędzki, Luis Alvarez Gaumé, Gerhard Mack Middle Row: Jürg Fröhlich, Gerard 't Hooft Front Row: Arthur Jaffe, Giorgio Parisi, Alain Connes, Konrad Osterwalder

What Does the Chief Editor Do?

The Chief Editor is responsible for the scientific quality of the journal. This has to be the number one focus, first and foremost.

The appointment of editors and advisors is crucial. These are the persons who shape the policies of the journal, and who shape the perception of the journal by the community. In CMP the editors have a great deal of freedom, so the editors need to commit to CMP being a flagship journal.

Generally I only appointed an editor who already published in the journal. Even though I knew personally most of the potential editors, nevertheless I tried to sit together with each new editor—either to discuss the philosophy of the journal, or to emphasize

how I hoped their participation would benefit the community. During my term as chief editor, I believe that I appointed almost thirty persons as editor or advisor.

A second job of the chief editor was to read many papers and to correspond with many persons: authors, referees, and editors—as well as the publisher. Many papers were sent directly to me at Harvard, and I received one almost every other day. I handled quite a few papers myself, including most papers written by other editors. So I ended up reading those papers, and in many cases sending them to a referee. But I also transferred a large number of the submissions to other editors. Occasionally the correspondence was not pleasant, as when I needed to mediate a disagreement between an author and an editor. But I always tried to be firm, and helpful.

And also one needs to manage the day-to-day flow of work (including developing the computer software at the start), to organize meetings of the editorial board, and to oversee the interface between my assistant, Barbara, and the publisher. This centered about Barbara's small office in Jefferson Laboratory.

My Assistant

One thing struck me when I was asked to be Chief Editor. I was sure that I needed the assistance of Barbara Drauschke, who had worked for me in the past, but who had left to raise her family. So I contacted Barbara and explained that I thought it would be impossible to make things work without her help. Luckily she came back as I requested and has worked with me ever since.

I need to tell one story about my experience with Barbara, who originally intended to teach school. But when those plans did not pan out, a friend brought her to Harvard and by luck she was assigned to work with me. What a boon for Harvard and later for CMP!

Barbara has an excellent memory for names and for people, so she soon got to be known by editors, authors, and referees alike. One of the jobs that Barbara had was to prepare all the accepted CMP manuscripts for typesetting, before they were mailed to Springer-Verlag in Germany. This job included reading each paper for its style of writing, as well as to correct issues of formatting. Although Barbara had studied neither mathematics nor physics, she used her intelligence adeptly. She could intuit when an author needed help.

As a result Barbara had a lively correspondence with many authors. She often received letters thanking her for improving the wording in their papers, or for suggesting other improvements. But after some time, a letter arrived from an embarrassed author, addressed to "Dr. Barbara Drauschke," thanking her for finding a crucial mathematical gap in the text. It turns out that when one has a gap in mathematical thinking, it often goes with a gap in writing—and in this case it had eluded the referee as well as the author! So perhaps it came as no surprise when one day a letter arrived from another author with thanks, and it was addressed to "Professor Barbara Drauschke"!

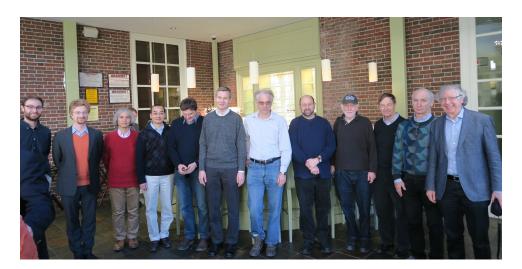
Computer Log

The other missing administrative tool concerned how to keep records. Up until then all the records were kept in the chief-editor's log book. I decided that it was getting too complicated to keep track of the increasing number of manuscripts in that way, and wanted to keep the records electronically. But at the time there was no software suitable for doing this. So a graduate student of mine, Mario Inchiosia, and I decided to write software to do this. We were quite naïve, and had no idea how hard this would be, so the project dragged on for almost a year. But it resulted in a robust program that we used to manage the journal throughout my tenure, and which Barbara still uses to track names and addresses.

Electronic data keeping, made it easy to see if the same article had been sent to more than one editor. If one editor had rejected a paper, the author sometimes sent it to a different one. With the computer system, it was easy to see when this happened, and for the sake of courtesy, I always let the original editor know. Generally nobody minded, but one time I got into the middle of a terrible struggle between editors. Editor A said, "It is your choice, but if you accept this paper, I will resign from CMP". But Editor B said, "If you do not accept this paper, then I will resign from CMP." I actually do not remember the outcome; but in dealing with people you can sometimes reason.

CMP Today

I have tried to survey the early history of CMP. Yet both CMP and Springer-Verlag have evolved. In January 2015, H.-T. Yau hosted the editors for a meeting in Cambridge, Massachusetts. Here is the group that attended lunch. That much is the same.



Editorial Meeting in Cambridge, Massachusetts, January 23, 2015: Alex Gontar, Nikita Nekrasov, Yasu Kawahigashi, Horng-Tzer Yau, Piotr Chruściel, Manfred Salmhofer, Misha Lyubich, Steve Zelditch, Percy Deift, Herbert Spohn, Konstantin Khanin, and Arthur Jaffe

The father of Konrad Springer, Ferdinand, cultivated his authors, including Max Born, Richard Courant, David Hilbert, and John von Neumann. Mathematical physics meant something special to him, and he also founded the famous "yellow series" of mathematics texts. He established regular social engagement between authors, editors, and the publisher, and this became the norm at Springer-Verlag. I experienced and also valued this tradition. Meanwhile the company grew into one of the largest academic publishers.

In 1999, Springer-Verlag changed in the same way that so many other organizations and institutions have changed. It went from being a family enterprise, with its primary vision focused on intellect, into a part of a giant corporation Bertlesmann, with its primary vision focused on business. Members of the top company management no longer went to dinner at the home of the scientist editors.

CMP has also evolved, and it is striking that it covers an every wider territory. The journal thrives today in this larger framework, yet CMP still attempts to maintain its "family" outlook. The internet and the arXiv have changed publishing tremendously over the past thirty years. And it is difficult to predict how the world of publishing will evolve in the future. Whatever happens, I hope that our community will preserve the aura of wonderful excitement from the constant discovery of new mathematical physics, along with the high intellectual standards now reflected by CMP.

Thanks

I am grateful to friends and colleagues for interchanges that helped me enormously in writing this essay. I especially thank Wolf Beiglböck, Barbara Drauschke, Jürg Fröhlich, Jim Glimm, Rudolf Haag, Klaus Hepp, Nico Hugenholtz, Res Jost, Jr., Konrad Osterwalder, Aldo Rampioni, David Ruelle, Manfred Salmhofer, and Valentin Zagrebnov.

Daniel Kastler (1926–2015)



Daniel Kastler passed away on July 4, 2015 in his 89th year. Daniel was born on March 4, 1926. His father A. Kastler, a prominent physicist, was awarded the Nobel Prize in 1966. In 1946 Daniel entered as a student at Ecole Normale Supérieure in Paris and in 1949 he was 1st ranked at the Agrégation diploma in Mathematics. From 1950, he was Lecturer at the Saarland International University until 1953, the year in which he became Associate Professor in Mathematics at the same University and received his PhD in Quantum Chemistry. It was a remarkable piece of work in which the whole computation of the diatomic (HF) molecule was carried out for the first time. Daniel came to the University of Aix-Marseille in 1957 as Associate Professor and was appointed Full Professor in 1959.

In the mid 1950s, he was among those who noticed the link between second quantization and multilinear algebra over Hilbert spaces. As a participant at the famous 1957 Lille Conference, he started, in collaboration with Rudolf Haag, to develop "AQFT", the algebraic approach to Quantum Field Theory, culminating in the formulation of the "Haag-Kastler axioms" (1964) and the concept of "Haag-Kastler-Ruelle local observables"; these sparkle among the most fascinating jewels of mathematical physics.

Developing this promising direction of AQFT, further fruitful collaborations emerged mainly with S. Doplicher, R. Kadison, and D. Robinson, on the one hand, and with O. Bratelli, H. Araki, M. Takesaki, A. Guichardet, M. Sirugue, and M. Mebkhout, on the other hand. Daniel and collaborators showed the relevance of C^* -algebras in the foundation of quantum statistical mechanics (e.g. KMS states, invariant states, temperature states, equilibrium states, ergodic states) and in the study of abelian asymptotic systems.

Constantly abreast of the latest trends in C^* -algebras and their consequences, from the mid of the 1980s, Daniel became very enthusiastic for Alain Connes' noncommutative geometry and its applications to fundamental interactions to which he contributed

substantially. In the meanwhile, with R. Stora he provided a geometrical setting for the important BRST transformations for quantizing gauge theories. With his stimulating enthusiasm, he carried in his wake several collaborators, among them J. Bellissard, D. Testard, R. Coquereaux, A. Jadczyk, J. Madore, T. Schücker, B. Iochum, P. Seibt, T. Masson, T. Krajewski and (his last PhD student) K. Valavane. His last research quest in the early 2000s was to "fish out the salmon among the medusae" (according to Daniel) with the help of a quantum group at the root of unity.

Daniel constantly sought to attract research experts to Marseilles in order to develop these streams of ideas in France and build leadership potential. He had also in mind a book project (several chapters should still be on the hard disk of his dear Macintosh) as his scientific legacy.

Daniel was not only a great scientist at the frontier between mathematics and physics. He was also a great builder with a humanist vision. Daniel was one of the three cofounders, in 1968, of the Centre de Physique Théorique (CPT) in Marseilles, together with J.-M. Souriau and A. Visconti. He certainly helped a lot in the creation of the Institute of Mathematics of Luminy as well, in order to bring together theoretical physicists and mathematicians in the same place. Further east, beyond the so-called "University of Bandol", his home where he brought several scientific guests, driving them by car on the coastal road passing along the impressive cliffs of Cassis, Daniel was involved in the creation of the Mathematical Physics team at the University of Toulon. Daniel has contributed a lot to create a main hub between mathematicians and mathematical physicists in the Marseilles area.



Liesl and Daniel at Daniel's 80th birthday. (Photograph courtesy of Bruno Iochum)

Many of us owe much to Daniel's foundational efforts, and we wish to pay a tribute to his fighting spirit, his open-mindness and his working ability. We will remember his humanity, his kindness and his humor.

All those great scientific and human qualities that Daniel was able to share and transmit were mainly due to the strong and unfailing support of his beloved wife, Liesl.

On behalf of the past and the present CPT members, and of the CPT Direction, Serge Lazzarini Thierry Martin

News from the IAMP Executive Committee

New individual members

IAMP welcomes the following new members

- 1. Dr. Roland Bauerschmidt, Department of Mathematics, Harvard University, USA
- 2. Dr. Nishanth Gudapati, Department of Mathematics, Yale University, USA
- 3. Martin Gebert, Institute of Mathematics, LMU Munich, Germany

Recent conference announcements

Asymptotic Analysis and Spectral Theory

October 5-7, 2015. University Paris Sud, Orsay.

Organized by Patrick Joly, Konstantin Pankrashkin, Olaf Post and Julien Sabin.

Open positions

Research Professor Position at Basque Foundation for Science

Ikerbasque, the Basque Foundation for Science will launch in 2015 its annual call for attracting senior researchers to the Research Institutions in the Basque Country. The 2015 call offers 10 permanent contract positions for experienced researchers within any of the Basque Research Institution (Universities, BERC - Basque Excellence Research Centres, CIC-Cooperative Research Centres, Biomedical institutions and Technology Corporations, among others).

Further details about this call and Evaluation Process are available at

http://www.ikerbasque.net/images/stories/ikerbasque_rp_2015_call_spec.pdf The deadline for applications is September 10, 2015, 13:00 CET.

PhD and Postdoc Positions in Mathematics of Wave Phenomena

The Collaborative Research Center (CRC) 1173 Wave phenomena: analysis and numerics offers several PhD and Postdoc positions. Starting on July 1st, 2015, the CRC is funded by the German Research Foundation (DFG). It is jointly run by the Departments of Mathematics of Karlsruhe Institute of Technology (KIT), University of Stuttgart, and University of Tübingen in collaboration with KIT research groups in optics and photonics, biomedical engineering, and applied geophysics.

Research topics: The goal of this CRC is to analytically understand, numerically simulate, and eventually manipulate wave propagation under realistic scenarios by intertwining analysis and numerics. Please check our website http://www.waves.kit.edu for more information on the research directions of the CRC and details on positions.

Starting date: July 1st, 2015, or later.

Applications will be considered until all positions are filled.

More job announcements are on the job announcement page of the IAMP

http://www.iamp.org/page.php?page=page_positions

which gets updated whenever new announcements come in.

Benjamin Schlein (IAMP Secretary)

AMERICAN MATHEMATICAL SOCIETY

Upcoming Publications

from the American Mathematical Society

Late 2015



A Comprehensive Course in Analysis (5-volume set)

Barry Simon (Caltech)

This five-volume set (totaling approximately 3,000 pages) authored by Poincaré Prize-win-

ning mathematician Barry Simon is a comprehensive graduate-level analysis text. It includes hundreds of problems and numerous notes to extend the text and provide historical background. Special efforts have been made to find simple and elegant proofs and to keep the writing style clear.

For more information on this book, go to www.facebook.com/simon.analysis

Part 1: Real Analysis • Part 2A: Basic Complex Analysis • Part 2B: Advanced Complex Analysis
Part 3: Harmonic Analysis • Part 4: Operator Theory

Early 2016



Random Operators

Disorder Effects on Quantum Spectra and Dynamics

Michael Aizenman (Princeton) and Simone Warzel (Munich)

Disorder effects on quantum spectra and dynamics have drawn the attention of both physicists and mathematicians. This book serves as an introduction to the subject of random operator theory. The text focuses on the relevant mathematics while paying heed to the physics

perspective. The techniques presented combine elements of both analysis and probability and couple mathematical discussion with interesting implications to physics. This long-awaited book by the leading experts in the field will be of interest to both graduate students and researchers.

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Benjamin Schlein Institut für Mathematik Universität Zürich Winterthurerstrasse 190 8057 Zürich, Switzerland secretary@iamp.org A comment by David Ruelle in the News Bulletin October 2011 republished in the "Mathematics, Science, History, and Culture" Magazine, June 3, 2015 (Press of Boston, Taiwan)

- ●[附短文]
- ●「標題〕 讀者回饋
- 「副標〕對《梅耶爾訪談》的回應
- ●[作者]大衛. 盧埃勒 David Ruelle
- ●[作者簡介]「待編輯」(Rutgers, USA & Bures-sur-Yvette, France) 親愛的伊夫. 梅耶爾,

我很高興讀到你的歐洲數學學會訪談,登載於IAMP2011年6月的News Bulletin 上,尤其是其中你談到法國高等學校的事。就像你一樣,我偏好像師範學校與綜 合工科學校這種菁英系統,但反對他們賦與學生的終生特權。後者實際上相當於 終生歧視非高等學校畢業的學生。有趣(或者令人感嘆)的是許多法國左翼知識 份子,他們可以為各式各樣的歧視奮鬥,卻獨獨忽略這一塊。

1964年我來到法國(在比利時、瑞士、美國的工作之後),當時法國科學高等研究院(IHÉS)還不叫這個名稱,位在法國系統的外面。關於訪問學人的討論,其考量都是基於科學研究品質的國際水準。只有到後來才會聽到像「他是高等師範學校近十年最好的數學家之一」這類的話。

我到達IHÉS之後,我的新同事米歇爾(Louis Michel)花了一些時間告訴我,在 法國的數學和物理社群中,誰來自高等師範學校,誰又來自綜合工科學校(當我 搞錯時,他會很生氣。)我既不是高等師範人,也不是綜合工科人,但過了一段 時間之後,我逐漸意識到,對許多和我互動的法國人來說這件事很重要(不過也 有一些顯然的例外,像托姆(René Thom)就毫不在乎,另一個很有意思的例外 是賈克路易·黎翁)。後來在法國科學院的物理組,我被兩個集團包圍,一個是 以艾伯拉干(Anatole Abragam)為首的沙克雷綜合工科集團

(Saclay-Polytechnique)

●*,另一個是以布赫賽爾(Jean Brossel)為首的烏姆 吸真節師範集團(Narmala Jilly) #表德爾(Jacques Fri

路高等師範集團(Normale-Ulm)。弗希德爾(Jacques Friedel)曾經做了一張物理學的「大獎」列表,發現兩個集團勢均力敵。但正如弗希德爾指出的,在這兩個集團之外則寥寥無幾。

●[譯註]沙克雷 (Saclay) 是綜合工科學校的主校區。

對各種群體的歧視十分廣泛,經常導致悲劇。法國人對非高等學校出身的歧視可能被認為是很小的事,感覺其實不值一哂。大家不應該這樣想。我認為格羅騰迪克的悲劇事蹟和他不是出身高等師範學校有莫大的關係。如果他是,IHÉS的院長莫特肯恩(Léon Motchane)在處理格羅騰迪克的事情時,就會更加謹慎,他不見得會離職。或者就算他離開IHÉS,也許這個社群會花更多力氣幫他找到適當的工作。

再次感謝你們發表這篇訪談,這讓我有機會重述這個眾所周知、但值得討論而非 只是默認的意見。

大衛. 盧埃勒

2011年6月26日

- ●[本文結束]
- ●[出處] :

原文分兩期刊登於IAMP News Bulletin Jul. & Oct. (2011)。本刊感謝該刊主編 Valentin A. Zagrebnov同意轉載並推薦刊登Ruelle之回應。IAMP News Bulletin為國際數學物理協會(IAMP)的新聞刊物。原文也曾節錄刊登於歐洲數學學會EMS Newsletter, Jun. (2011),全文也曾刊登於瑞典數學學會的Medlemsutskicket, May 2011