

# *prudentia*

HIGH IQ SOCIETY FOR THE TOP 1/250 OF THE POPULATION



ABOUT KARL POPPER

WHY THE GIFTED NEED SUPPORT

Journal Issue #1 – September 27th, 2018

# EDITORIAL

Welcome to something new!

This is not Prudentia Newsletter #3. No, this is Prudentia Journal #1. I have had the idea that it might be good to occasionally release more than just a newsletter in the name of Prudentia. To be more precise, I have contemplated releasing an issue of Prudentia Journal after two issues of Prudentia Newsletter. In other words, there will – probably – be a new issue of Prudentia Journal once in every three months.

As the name suggests, this is a kind of journal, or a magazine. As you might know I also edit Genycs Magazine these days, which issues in a bimonthly manner (at least it has issued in this manner so far). While Genycs Magazine will focus on topics related to computers, programming and computer science, Prudentia Journal will be open for all other sorts of topics.

In this issue, you will find an essay about Karl Popper and his philosophy, as well as a statement on why I consider support of the gifted necessary, both of them having been written by me.

Of course I also invite other members of Prudentia as well as general readers to submit their articles for the upcoming next issues of Prudentia Journal. The journal is supposed to give you a platform for presenting your ideas and having them discussed by others. Don't ignore this opportunity!

Enjoy reading – I am looking forward to hearing from you.

Claus Volko, cdvolko (at) gmail (dot) com

# ABOUT KARL POPPER AND HIS PHILOSOPHY

Sir Karl Raimund Popper was undisputedly one of the most important philosophers born in Austria in the 20th century. Many clever thoughts have been preserved from him, which are worth quoting in conversations where appropriate. I myself adorn my "Facebook Wall" with Popper's aphorisms. My parents have consciously renounced to give me a religious education. Instead, my father already taught me in young years the philosophy of Karl Popper, in particular his considerations on the theory of knowledge and science. I appreciate Popper very much. Nevertheless, in this essay I will take a critical look at his life and work.

What led me to write this essay:

The impetus for this essay came from a discussion on Facebook. My conversation partner was an older man, an American, who acquired a lot of knowledge in the course of his life. He said that I was intelligent and "somewhat erudite", but lacking "intellectual discipline". I interpret it this way: Not everything that I say on Facebook is one hundred percent logically consistent and backed up with facts. Surely, that may be the case. Facebook as well as my weblog are a middle thing between meaningless chatter and highly scientific publication: It is a space for anecdotes, personal experiences, superficial analyses and impressions of what I have read and so on. Not at all do my postings on Facebook or my weblog claim to be scientific. It's more like a publicly accessible diary of a person who's not uneducated and has an alert mind. But I understand my acquaintance when he accuses me of occasionally implicitly making assumptions that might be true, but do not necessarily have to be true, and to make statements which are only true if these implicit assumptions are correct. The criticized behaviour can be observed in many people discussing on the Internet. I myself occasionally complained about it.

Anyway, his criticism reminded me of something I recently read in Kurt Salamun's Popper biography "Ein Jahrhundertdenker". Popper was supposed to have problems with the individual psychologist Alfred Adler. The reason for this is that this Adler often implicitly made assumptions in his analysis of patients. In doing so, Adler argued with his "experience". As Popper notes, however, it may happen that a train of thought is only logically consistent if the premise that has not been made explicit is true. If it turns out that these assumptions are wrong, a completely different logical conclusion may emerge. It is therefore intellectually dishonest of Adler that he makes these assumptions; the justification with the "experience" is a reference to an authority, something that Popper profoundly detested, as his reflections on political philosophy also showed ("The Open Society and its Enemies").

Without having studied psychology (apart from the lessons at grammar school and in my medical studies), I believe that I know enough about the essence of a human being to make the following statement about Popper:

Popper was a tragic figure. He may have found recognition by historians as a "thinker of the century", but basically he failed. Because: It is clearly recognizable that his driving force

was the search for certainty. He wanted to find a method by which scientists could arrive at reliable findings. But what he only succeeded in doing was to show that scientific statements, since they are universal statements, can usually only be refuted, but not proven with absolute certainty. However, his conclusion that science should be limited to refuting hypotheses, starting with the most unlikely hypothesis of all, is not in the sense of a productive science: because refuting hypotheses, the correctness of which was extremely unlikely anyway, does not produce any real gain in knowledge. Popper had to admit that scientific knowledge always has only a provisional character. "We don't know, we guess", he is said to have said himself once.

So Popper failed to achieve his goal, namely to gain certainty about the validity of scientific findings. When you look at his photograph printed in Salamun's book, Popper actually appears to be very sad. A tragic figure, despite all successes.

I myself tried to formulate everything as comprehensibly as possible in discussions on the Internet earlier (about 15 years ago), paid attention to strict logic, provided as many sources as possible and quoted them. At that time, I was often reproached by my discussion partners for "approaching everything scientifically", which was not necessary and not wanted by these people; they were more interested in subjective opinions and individual experiences. It may be that over the years I have adapted to my partners in this respect, which of course may have had the effect of distancing myself from what my friend on Facebook would consider to be right. Had I known this man 15 years ago, I might have been happy to finally have someone who would recognize my qualities. So I have at least adapted a little to the Internet "society".

Personally, I'm glad that I have the opportunity to earn a living in the private sector, even though I'm interested in science (and still occasionally get annoyed that I didn't get a job at the university after my doctorate). Because it is obviously true that what many scientists would like to have, namely the final certainty, is not possible at all to achieve. This may also explain why many university professors seem so frustrated.

Claus Volko, cdvolko (at) gmail (dot) com

# WHY THE GIFTED NEED SUPPORT

## General observations

For more than 16 years, I have been working in the environment of various highly gifted associations. In the beginning I was only a member of Mensa; in the meantime I have participated in numerous, mostly informal and international associations of this kind and left Mensa out of frustration about the lack of understanding of Mensa members for the problems that this essay will deal with.

Even before this time I had been dealing with highly gifted people. I was a regular author of professional articles for German computer magazines and was thereby in contact with several highly intelligent people - admittedly mainly those whose interests were essentially limited to "computer science". Also in the so called demoscene (contrary to certain associations, which are initially imposed on the unsuspecting layman, this is an international community which deals primarily with computer art) I had to deal with numerous highly gifted people. These were those who not only distinguished themselves by a high score in the intelligence test, but who really had skills, be it in the field of programming, drawing or composing music. Many of my acquaintances were between five and ten years older than me. Some of them have since become university professors.

The big difference between these people, most of whom I knew even before I joined Mensa, and those I met afterwards in the various highly gifted associations, was that the first group actually had recognizable knowledge and skills that seemed extraordinary to me, while the second group had the common characteristic of having scored excellently in at least one intelligence test, but in my opinion nothing else distinguished them from the normal population. What might be the reason for this?

In the meantime I think I know that the reason for these differences lies in the attitude of the parents to their children. Above all, it may have been due to whether the parents attached importance to the education and training of their children or not. In one group the talents were optimally supported, in the other not. It is also clear that the motivation for adults to develop skills that have been neglected by parents is generally very low. Consequently, it is clear that if you want your children to become something special and to achieve extraordinary (intellectual) achievements in their lives, you have to support them! The fact that not all parents have the same opportunities to support their children is another matter.

I would like to use a concrete example to show that it is not possible to support one's children enough - namely with my own biography, which I will then compare with the life stories of Fields Medal winners. This essay is a plea for the promotion of the gifted. It wants to shake us awake and unfortunately cannot help but point out that what is commonly understood in Austria as the "support of the gifted" is not such in my sense at all.

I was born in 1983 as the son of a primary school teacher and an engineer. My parents had wanted a son, and this son should ideally become a doctor. As a child, I was partly allowed to do what I wanted, as was customary with other children. I mainly watched TV and read comic magazines. But my parents also tried to teach me knowledge and skills at an early age. At first it was noticeable that I showed no interest at all in manual activities; I drove my father to despair, because I refused to practice handholds and similar "practical" things. In the beginning I apparently had no interest in reading books either, but it was easy for me to learn to read and write. I have received documents written by me before I started school which prove that I had already mastered German grammar and spelling almost perfectly at that time. (I started school shortly before my sixth birthday.)

Since I was to become a doctor, my father tried to make me fond of this profession even when I was still a primary school pupil; but I showed no interest and was not prepared to study the textbooks of medical physics and cell biology offered to me. I was much more interested in computers. Among other things, I regularly read computer magazines and sketched drafts of my own computer games. At the age of eight I began to teach myself how to develop computer programs with the help of magazines and books; at the age of twelve I wrote a programming course for the language QBasic, which was printed in several German computer magazines, achieved an extremely high degree of distribution in the German-speaking world through the Internet and today, in 2018, 22 years after its publication, is still regarded as the standard work. [1]

Since my father, because of his general experience with school children, was concerned that the subject of mathematics might be a hurdle for me, he decided to support me especially in this area. When I was eight years old, he taught me almost all of the mathematics that is taught at a grammar school, except geometry. At the age of eight I was already familiar with the differential calculus, among other things. This kind of support gave me great pleasure. Unfortunately, my father's knowledge of mathematics as an engineer was above average, but still quite limited. Had I received the same intensity of support at university level, I probably would have had the knowledge and skills of a mathematician before my 14th birthday.

At school I was generally regarded as "clever", but it was only when I reached second place in the "7th Vienna Mathematics and Thinking Competition" at the age of 13 without any preparation that my teachers put the word "highly gifted" into their mouths. In this competition I had missed the first place only because I had made a miscalculation, but basically I had found the right solution for all examples.

Even before my 18th birthday I had passed the Matura with an average grade of 1.0 ("excellent"). Nevertheless, I did not feel optimally encouraged; instead of teaching me more about mathematics, my father had in recent years largely confined himself to talking to me about politics. Since I had taught myself programming and thus had no real training in it - I didn't even have acquaintances or relatives who could program, apart from my pen pals; most of my classmates, who had started programming a few years later than me, but still

before their 14th birthday, had relatives, mostly fathers or siblings, who could already program and teach them many things - I thought I was at a disadvantage compared to HTL graduates (HTL being a special sort of technical school in Austria). That's why I gave up my original plan to study computer science right after graduating from high school and enrolled in medicine, as my parents had wanted me to. But when it turned out that I didn't like the pure memorization, as it was necessary in medical studies, and my suitability for the medical profession was doubtful anyway due to my low interest in manual activities, I also started to study computer science after three years at the same time.

Having passed the Mensa admission test at the beginning of the second semester at medical school it was finally verified that I was indeed gifted. As was later shown in special tests, especially in the logical-mathematical area, this was probably not only a "light", but even an extremely pronounced high talent - in some cases I achieved IQ values of over 170! [2] However, since I had the attitude that I wanted to successfully complete a course of studies that I had already begun, I did not think of giving up my medical and computer science studies in order to study mathematics instead.

Finally I got my doctorate in medicine and finished my studies in computer science with the title Diplom-Ingenieur (and even with distinction).

After four years of successful work in software development, shortly before my 35th birthday, I had the idea that maybe I should do mathematics after all - after all, I obviously had the necessary talent. My main motivation was that I had the last chance to win a Fields Medal in 2022. Through the website unsolvedproblems.org I knew some unsolved problems in mathematics, and I enjoyed thinking about them occasionally. Should I deal with matter more systematically and seriously? However, it was clear to me that I should not lose sight of the fact that I was working and that it was necessary for me to use part of my free time for professional development.

So I came up with the idea of studying the careers of two Fields Medal winners - my compatriot Martin Hairer and Mrs Mirzakhani. I was astounded at what I saw.

## Comparison: Fields Medal Winners

First I admit openly: When I read in Wikipedia what the mentioned mathematicians had been doing, I hardly understood anything. My computer science studies were very mathematically oriented and very theory-oriented; I had specialized in algorithms, formal logics and theoretical computer science. But this study was clearly no substitute for studying mathematics. This meant that in the remaining four years I might still have a lot of knowledge to acquire if I were to pursue my goal seriously.

But then it became clear to me that the train might have left long ago. For it was not only his studies that made the difference. Hairer's father was already a mathematics professor; obviously he had taken his son's advancement seriously, and because of his education he had

been able to teach his son much more than my father could teach me. Mirzakhani, on the other hand, had attended a special school for particularly gifted girls. I could not keep up with that either. The school I had attended had been a regular grammar school. Most of my classmates probably had an IQ in the range between 110 and 120. I'm sure I wasn't the only gifted student in my class (although I was the only student my teachers thought was highly gifted), but overall we may have been three or four. To be best in class in such a class is different from being at the top in a purely gifted class.

Mrs Mirzakhani also took part in the International Mathematical Olympiad twice as a teenager and won the gold medal both times. This is of course a good basis if you want to do serious mathematical research. It confirms that you are one of the best in your field and that it is worth investing time to become even better.

On the other hand, I was not allowed to take part in the Mathematics Olympiad because the obligatory preparatory courses took place just at the same time as our class had gymnastics lessons. I don't know whether the mathematics teacher, who was also responsible for creating the timetables at our school, deliberately made this division so as to make it impossible for me to take part in the Mathematics Olympiad. Probably it was just a "stupid" coincidence.

Overall, however, by looking at these two CVs, I learned that the difference in level - at least in terms of mathematics knowledge - between me and these two people was enormous, that I probably would not be able to catch up within the next four years, and that despite my talent I might have little chance of actually winning the Fields Medal, also because such awards are not only about concrete mathematical achievements, but also about the "framework".

**My conclusion: I was not optimally supported!**

The misery of the promotion of gifted students in Austria

But through my former membership at Mensa I know that I am still doing relatively well overall. At Mensa I met many people who, despite their high talents, achieved much less in life than I did. Partly because the giftedness was recognized too late, partly because it was negligently and inadequately handled.

A particularly blatant example is that of a young woman whose giftedness had been detected by a psychologist before she entered school. The mother was satisfied with the diagnosis and thought she did not have to draw any conclusions from it; she started from the false assumption that her daughter would assert herself anyway. When her daughter then stumbled during her university studies and finally gave up her studies after less than two semesters, her mother realized that she had made a mistake. Years before, I had tried to inform her about the need for support, but I was persistently ignored.

But also from the official measures for the highly gifted promotion, of which I got a lot by my membership of many years in this association, I am anything but enthusiastic. It seems to me that the "support of highly gifted students" in Austria means in part simply extra tuition for problem students who have accidentally been diagnosed with a high IQ. The goal: to get the Matura (high school diploma) and to integrate into the world of the "normally gifted". This is not what I understand by the promotion of the gifted. I understand the support of the highly gifted as the development of special talents at the highest level.

It seems that in Austria it is up to the parents alone to really teach their children something that goes beyond what you learn at school. This of course favours parents with a high level of education and special knowledge. It puts children from the working class at a disadvantage and those whose parents - for whatever reason - are not prepared to deal with them so intensively.

This situation may be in the sense of conservative people who are concerned with maintaining existing social structures. But it is not in the sense of liberally thinking people who want everyone to be given the opportunity to develop their talents and to attain a corresponding position in society.

## What must change

Basically, it is the attitude of society that has to change: You not only have to perceive the other as an annoying competitor and fight against him, but you also have to see opportunities in it when someone develops and exploits his potential.

The promotion of gifted young people tends to be an altruistic activity, even if some people demand monetary remuneration for it. In this context, it should also be said that it is often read in literature that highly gifted people are generally more altruistically required than "normally gifted people" (see for example [3]). Based on my experience with Mensa, I dare to doubt this thesis, but it may be that the Mensa members I have met are not representative in this respect of the highly gifted as a whole.

In any case, society still has to learn altruism. Unfortunately, we have not yet reached the point where it is taken for granted that helping others is a matter of course. Especially the highly gifted are regarded by many as a danger because of their actual or supposed abilities, which is why they are more inclined to forego additional support.

A society that allows the most gifted among them to vegetate like many that I have come to know in the various high-intelligence associations is not a well-functioning society based on solidarity.

Highly gifted people also need support because it is necessary for them to receive guidance on how to proceed if they want to make something out of their abilities. A structured approach is a "conditio sine qua non"; it is not for nothing that universities have curricula. In

addition, from a certain age it is simply necessary to have someone with experience at one's side who can judge whether it is worth investing the necessary time and energy in a larger project, such as a research project.

Claus Volko, cdvolko (at) gmail (dot) com

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