

Some child prodigies I have known

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I was always interested in child prodigies perhaps because I was one too. My parents were both mathematicians and I learned a great deal of elementary mathematics from them. My first discovery was when I was 4 years old and I told my mother that if you take away 250 from ~~100~~ 100 you get 150 below zero. I wrote my first paper when I was 12 which is early but Göta one of my child prodigies wrote ~~1~~ one of his important papers on Hamiltonian ~~cycles~~ cycles in graphs when he was $15\frac{1}{2}$ and these type of theorems are still known as Göta type theorems. Not all mathematicians were child prodigies.

e.g. Weierstrass and Hardy were not prodigies but Gauss and Robert Wiener certainly were. There are many prodigies in mathematics and music but very few in literature. I know of only one in poetry Ravelle who wrote poetry for when he was between 16 and 19 and never wrote later.

I ~~the~~ feel it is important to recognise talent as early as possible and give them all possible encouragement and help without trying to push them. Robert Wiener in his autobiography complains fairly bitterly that his parents pushed him.

Several ~~one~~ details will be given about my contacts with prodigies and I will try to keep the discussion as non technical as possible.

I mention here only one fact. I met Coisa at lunch when he was less than 12 years old, while he was eating his soup I asked him the following problem:
 Let $1 = a_1 < \dots < a_{n+1} \leq 2n$ be $n+1$ integers not exceeding n prove that there are two of them which are relatively prime.
 When he finished his soup he just remarked two of them are consecutive. I need not say I was very impressed and since then I worked a lot with him our first substantial joint paper was written before he was 15 years old.

Kon Berger a Canadian mathematician wrote a nice book entitled Mathematical gems. One of his chapters is entitled The Mathematician Louis Coisa. This article

date is described in the book. The reviewer in the American Math Monthly writes: "Champaign would have been more appropriate than wrap"

Finally let me finish with an ~~and~~ anecdote. Edison the great inventor once said "Genius is one percent inspiration 99 percent perspiration (i.e. hard work)".

This is certainly not so for Mathematics. On the other hand ~~one~~ ones "brain must be open" i.e. receptive if a new idea comes along - the opportunity for a big ~~discovery~~ discovery may not return. The following I think true story to show what happens if ones brain is not open. In 1895 Rontgen noticed that if you

leave a photographic plate near a ~~the~~ Crookes tube the plate darkens, he realized that this observation is important and for a few weeks he ~~not~~ worked only on this. These weeks changed the world. He discovered Rontgen (or x-ray), radioactivity soon followed and the world was never the same in fact it is unfortunately not yet certain if we will survive it.

Later it turned out that Crookes made the same observation, but he only deduced "do not leave a photographic plate near a Crookes tube" His brain was just not open. I sometimes call this the biggest mistake in history.