## Pedigrees

Family trees can differ widely in shape. They can be constructed in such a way that they show what an enormous multitude of ancestors were required to produce one unique individual, normally the composer. Or they show how a certain person in the remote past (normally a man and bearer of the family name) became the ancestor of an expanding mass of descendents. A combination is also possible: an honorable person from the past is shown as a product of numerous ancestors and he is positioned at the top of a pyramid of descendents.

If we take 2 parents and 4 grandparents we have to postulate 16 grandparents of these 4 grandparents, or 16 great-great-grandparents. Let's say that there is a new generation every 25 years, than we find 10 generations in 250 years. That means that a 50 year old reader (born halfway through this century) has 1024 ancestors round 1700, the end of our Golden Age. Counting further back we come up with more than a million ancestors round 1450, in the Autumn of the Middle Ages. Another quarter of a millennium back we find ourselves in the year 1200, the time of the Crusades. Then we have to put more than a billion ancestors in the tree. Is that realistic?

No, it's not. As late as 1500 there were half a billion people on this earth and only in 1800 the number of inhabitants reached 1 billion. So there is something wrong with our reckoning. And this is only aggravated by going back to the year 0 , when only a quarter of a billion people inhabited the earth, and it becomes still worse when we dive into prehistoric times. In short, there are many overlaps in our progenity, also without direct cousin-to-cousin marriages. This is no problem at all. For cosanguine marriages pose a problem in the short term for the immediate descendants. But in the long run they lead to the disappearance of disorders because unfavourable genetic traits of the father and mother coincide in an individual who can't survive or is unable to procreate. This results in a sort of extinction of this trait.

A medical professor said recently to one of my colleagues: "What, you have only one child? What a waste of your talents!"Here the learned man made a mistake which we can easily see after agreeing upon the above mentioned picture. For an individual has a wide fan of ancestors before him and also a fan of descendants after him. He/she is only a haphazard composition of the characteristics handed down and
he/she offers an abundance of different possibilities to the future individuals. The enormous diversity among his/her children is already an example of this principle. And we are not even talking about his/her partner.

We are just the waist in a sandglass. We are unaware of many characteristics of our ancestors, good or bad, and a multitude of possibilities for our (greatgrand)children slumber within us without us realising it. So, a family tree is primarily a lesson in modesty. We are only a thoroughfare for the colourful genetic mozaic before and after us.

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