

## Donald Knuth - My advice to young people (93-97)

If somebody said what advice would I give to a... a young person - they always ask that funny kind of a question. And... and I think one of the things that... is... that I would... that would sort of come first to me is this idea of, don't just believe that because something is trendy, that it's good. I'd probably go the other extreme where if... if something... if I find too many people adopting a certain idea I'd probably think it's wrong or if, you know, if... if my work had become too popular I probably would think I had to change. This is, of course, ridiculous but... but I see the... I see the... the other side of it too... too often where people will... will do something against their own gut instincts because they think the community wants them to do it that way, so people will... will work on a certain... a certain subject even though they aren't terribly interested in it because they think that they'll get more prestige by working on it. I think you get more prestige by doing good science than by doing popular science because... because if... if you go with... with what you really think is... is important then it's a higher chance that it really is important in the long run and it's the long run which... which has the most benefit to the world. So... so usually when I'm... when I'm writing a book or... or publishing a book it's... it's different from books that have been done before because I feel there's a need for such a book, not because that... there was somebody saying please write such a book, you know, or... or that other people have... have already done that... that kind of thing. So follow your own instincts it seems to me is better than follow the... the herd. I... my friend Peter Wegner told me in the '60s that I should, for Art of Computer Programming, I shouldn't write the... I shouldn't write the whole series first, I should... I should first write a... a reader's digest of... of it and then expand on the parts afterwards. That would probably work for him better than... much better... but I... I work in a completely different way. I have to see... I have to see something to the point where I've surrounded it and... and, sort of, totally understood it before I'm comf... before I can write about it with any confidence and so that's the... that's the way I work, I don't... I don't want to write about a high level thing unless I've fully understood a low level thing. Other people have completely different strengths I... I know but... but for me, I... you know, I wrote a book about the... a few verses of the Bible, once I had... once I understood those verses and... and sort of everything I could find in the library about a small part of the Bible, all of a sudden I had firm pegs on which I could hang other knowledge about it. But if... but if I went through my whole life only under... without any... any in depth knowledge of any part then it all seems to be flimsy and... and to me doesn't... doesn't give me some satisfaction. Well the... the classic phrase is that liberal education is to learn something about everything and everything about something and... and I like this idea about learning everything about... about an area before you feel... if you don't know something real solid then... then you never have... have enough confidence. A lot of times I'll have to read through a lot of material just in order to write one sentence somehow because... because my sentence will then have... have... I'll choose words that... that make it more convincing than if I... than if I'm... than if I really don't have the knowledge it'll somehow come out implicitly in... in my writing. These are little sort-of-vague thoughts that I have when reflecting over... over some of the directions that distinguish what I've done from what... what I've seen other people doing.