

CHRISTMAS SPEECH 2013

Dear friends, colleagues, students, and all others who are here this evening,

It is my pleasure tonight to address you, the community of the Mathematical Institute, on this festive occasion. Last year, Arjen Doelman investigated the question whether this evening has already reached the status of a tradition. I certainly feel the weight of my 16 predecessors.

The year before, Aad van der Vaart addressed the harsher ways of interaction that seem to become commonplace in society and in science. His last sentence struck a particular cord with me: "if ever you become an administrator, remember to remain the nice person you have always been".

As the chair of education of this institute for the last two years, I am at least a part-time administrator and I'm trying to follow Aad's advice. I think the breakdown of trust at many levels in society and also within our own university have not come to a halt yet. There is a new focus on integrity and I have been urged to participate in professional leadership training, which involves role playing and self analysis. Last week, my peers in the group that I am in, assessed that I am indeed a nice person, so I think Aad should be pleased.

However, they also said this is not necessarily a good thing, and they decided that I should explore being angry in role playing with a special purpose training actor. I looked at the training actor, and for a moment I considered declining the invitation. But being the nice person that I am, I played along and I got quite angry. Everyone was very pleased.

What does this have to do with Christmas? You'll have to give me a minute to get to my main point.

My children love Christmas, and they love the Christmas story. We have read the children's bible with them, but we are not a religious family. A few years ago, in two consecutive summers, the parents of my wife passed away. They were both devout Catholics and they were very fond of our children. At the funeral service with incense, candles, flowers, and the bedding of a tight knit local community, the priest involved the children in a friendly way, that offered consolation for the loss of their dear grandparents. A few weeks later they came to me to ask: why are we not being raised in the Catholic faith?

I guess every parent comes to this point where it becomes clear that what you can offer your children is bounded. I explained to them that I am an atheist mathematician from Amsterdam and I have little insight into the existence of the almighty. I can however explain a very elegant argument for the existence of infinitely many prime numbers. Somehow that didn't have the same appeal. And so, a quest was started: how can I give a better answer?

If you are faced with a mathematical problem that you cannot solve, then you can try to assume more, in order to find a proof in specific cases. Or you can assume less, and set a lower target to prove for a wider variety of cases.

Let's go for the second strategy, and rather than learning more of parts of Catholicism, let's see how a mathematical mind may relate to religion in general.

In Dutch, the word for religion and belief is the same. And while we as mathematicians are perhaps not great believers, we are very good at making assumptions, and reasoning under

certain assumptions. So, what are the operating assumptions in different religions? I'm sure many wiser people have written about this. My own simple wikipedia search reveals that in fact in Buddhism this is expressed very clearly in the form of the four noble truths.

Let me state them in an oversimplified version, and for the sake of this evening we will simply assume them as axioms.

The first noble truth may well be familiar to everyone: life is suffering. Or, phrased more mildly: suffering exists. This is not just about big suffering, but about all the little things that worry us, that annoy us, that take our energy. Perhaps you worried whether the trains are running today or maybe you couldn't decide what to wear. Will they run out of my favorite dish before I am served? I'm wondering if you are listening with interest, or if you have already tuned out. All this is suffering. I think this is familiar to everyone and this is a safe axiom to assume.

The second noble truth identifies the root of suffering. This is essential.

It is tempting to say that the world is bad and it causes us to suffer. But in fact we do it to ourselves: we cause our own suffering with our desire to always look good in front of other people and our fears of all the things that can go wrong. We always want to do more, achieve more, and to be appreciated and recognized. A prime source of suffering is our need to feel like we are in control. Sometimes we try to cheat fate by coming up with clever schemes and we worry that they may fail.

There's a story of a student who is very worried about an important exam that's coming up. She goes to the office of the young professor, and falls to her knees. She says: "I would do anything to pass this course." The professor looks up in surprise and asks "Anything?" She flicks her hair back, and the room goes quiet. She whispers "Anything." The professor leans forward and in a soft voice he asks "Would you study?"

Let me give an example that is a bit closer to home: the suffering in the office of our dean of sciences. After it was discovered two years ago that we have all been teaching for many years without proper qualifications, we now managed to generate the paperwork to solve the problem: we all have our signed certificates. This year there is particular focus on the need to have annual progress reports on all employees, that meet certain standards that we are still struggling to understand. The need for the feeling of being in control has reached a point where we now need signed agreements about the level of student enrolment in 2016. So Peter and I enter into discussions about the numbers, we get frustrated, and we feel that the fears and need for control at the office of the dean are now causing us to suffer.

So here is the key point: in view of the second noble truth this is a big mistake. The suffering that Peter and I experience is our own doing. Instead of becoming irritable, we could also respond with compassion and gentle kindness.

In fairness, I should say we are not quite there yet, and, in Peter's case, I would say we are nowhere near that.

Noble truth number 3: it doesn't have to be like this! Perhaps this best fits the Christmas message: there is a light in the distance, there is hope to get to an enlightened state, free of suffering.

Noble truth number 4 is about how to get there. As you can imagine, now the theory becomes more complicated. Lots of meditation may well be required.

There are 8 different angles you can take to help you escape from the cycle of suffering. A key part is to let go of the idea that you have to be in control at all times. This is not easy.

A man is running through the woods, chased by a tiger. He plunges into a ravine and manages to grab a branch part of the way down. The tiger is looking down the cliff. The man calls out: "Hello, is there anyone there?" The deep voice of god can be heard from the sky: "My son." "God?" "Yes, you'll be alright. All you have to do is let go of the branch." "Hello? Is there anyone else?"

It is hard to let go.

Some suggestions you can find are mental exercises: to be in the moment rather than thinking about things in the future, to be present with your full attention, rather than multitasking, to ask yourself in times of frustration: what am I believing now? Perhaps it is just a story that is not necessarily true. Even if you are sure that what you believe is true, simply asking the question may create some space. There are big steps and small steps you can take. The main mistake is to think you can get through things by hacking away at your to do list and to keep trying harder. To put it bluntly, even if you are successful in the rat race, your life is still the life of a rat.

Let me take it a bit closer to home again. Do you know what happens if you send an email to Hendrik Lenstra with the word "urgent" in the subject line? He will not read it, but he will put it in his spam box instead. What a great way to stop the cycle of suffering!

When we are having lunch in our cafeteria, we often discuss day-to-day worries, the budget for next year, the so-called "quality cycle" and the ensuing paperwork and deadlines. And then Hendrik will jump in, completely ignoring what's going on, to present the question of the day. You have to realize that in order to understand the question of the day and the progress that Hendrik has made on it so far, your full and undivided attention is needed. There is no room for multitasking, and your mind is forced to be present here and now.

At times when this happens I have caught myself thinking: this is an interruption I cannot deal with right now. However, if we assume the four noble truths, this is not an interruption at all - it's the budgets, forms and deadlines that are the interruptions. The question of the day is a chance to alleviate suffering. So, Hendrik, feel free to interrupt any time. Actually, he feels quite free already, and I don't need to say this at all.

Of course we cannot simply drop everything that we do, and pursue a state of bliss instead. I will continue to read your emails even if the word "urgent" is in the subject line. But I would like to express my wish for everyone here in the new year: let's make more room for what is truly precious to us. Let's relax a bit more, let's have some faith that things will work out. Let's follow our curiosity wherever it may lead us, and let's engage fully in the act of doing of mathematics together.

Thanks for listening. I wish you all a merry Christmas.

Bart de Smit

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