

***This speech was originally written by Sarah Marley, as part of the Student Occasional Address at the Curtin University Science Student Awards in February 2015. It is written in the first-person, and describes Sarah's life story, adventures, and advice to future scientists.***

Good afternoon everyone. I would like to start by congratulating you. Not just on the achievement of being at this awards ceremony today, but also for being at a point in your career where your path lies slightly undecided in front of you.

I'm sure that this is not exactly what many parents in the audience would like to hear. They would probably prefer me to say that soon you will graduate, get a stable well-paying job, and settle down. But since I am still waiting to do those things myself, I can hardly advocate them to you.

The truth is, you are at a stage when you are surrounded by opportunity. There are options to travel, help with cool projects, meet new people, gain new skills... What will your future hold? Back-packing through South America? Volunteering on a whale shark project in Indonesia? Collecting ice-cores in Antarctica? Learning a new language as you work abroad in Europe? Developing new food production techniques in Africa? Presenting your research at an international conference in North America? Searching for answers beyond the stars? The possibilities are endless.

However, so many possibilities can also be a bit overwhelming. It may be difficult knowing where to even begin on this journey of discovery. It can also be a bit intimidating, applying for opportunities along with dozens maybe even hundreds of other applicants. You might wonder if it is worth it. Do you even have a chance?

Luckily, to quote science-fiction author Terry Pratchett: *"Million-to-one chances happen nine times out of ten"*.

So one of the things I would like to encourage you to do, is to take a chance. Even if you are not sure whether you will succeed or even how things will work out, you will never know unless you try.

People often hesitate before taking a chance. They see it as risky, full of uncertainty. And quite often we are encouraged to "play it safe": stick with what you know, don't go out on a limb, be rational, make logical decisions.

But I would rather follow the advice of one of my conservation heroes, the late Gerald Durrell. For those of you who are unfamiliar with the work of Gerald Durrell, he was one of the first people to advocate captive breeding, re-introduction, and habitat management in order to save threatened species. He later went on to found the Jersey Zoo, which at the time was the first zoo in the world to focus exclusively on threatened species, and to this day it is one of the leading institutions in terms of species conservation. Gerald Durrell also produced countless novels and film pieces promoting conservation, created the Jersey Wildlife Preservation Trust, and initiated multiple conservation projects in the home countries of the species he was trying to save. And it was Durrell who said: *"I have rarely, if ever, achieved anything I wanted by tackling it in a logical fashion"*. Interesting words from a man who achieved so much! This advice has given me plenty of adventures to add to my life story.

My PhD project is focused on the response of coastal dolphins to noisy environments. To collect the data for this, I have a large team of undergraduate volunteers who assist me in the field. We work closely as a team, but generally everyone starts as strangers. So one of the first things I ask people to do in the field, is to share their life stories with us. I think this is an excellent way of getting to know one-another and kick-starting some team spirit. Please allow me to give a brief rendition of my life story to you now:

I am from a town called Westhill in the north-east of Scotland. I was fortunate enough to be born into a family that loved animals – from a young age I was taught to appreciate nature, in all its shapes and forms. Rather unfortunately, my parents divorced when I was five years old. This meant that, statistically-speaking in the Scotland of ten years ago, I was less likely to do well at school, get a good job, or even go on to university.

Of course, as a child I had no idea about this – rather more pressing from my point of view was that it also meant we couldn't afford to go on overseas holidays like all my school friends. Instead, we went to a small fishing town in the north of Scotland to visit my Mum's family. There the choice was to either stay inside, be well-behaved, and humour elderly relatives – or go outside. Needless to say, I generally took the outside option. But being a small Scottish fishing town, there wasn't exactly a lot to do. So I spent most of my school holidays there sitting on the walls of the coastguard station, looking for dolphins. By the time I was nine or ten, I had my own pair of binoculars and notebook to help with this task, and I would religiously record each dolphin sighting in minute detail.

At the time I had no concept of this being science – it was just better than the alternative of being inside and well-behaved. I also had no idea of turning it into a career – scientists were the smart, educated elite in my eyes. Coming from a low-income family, none of whom had ever attended university, it did not seem like a possible future for me. The chances seemed so small that it wasn't even worth contemplating it as a dream.

But, luckily for me, million-to-one chances happen nine times out of ten.

To everyone's surprise, including my own, I did quite well at school exams. I then applied for university, because it was what all my friends were doing, and chose biology because it was the class that made me happiest. I think that was the first time I had made a big life-decision, and it was based not on reason, not on logic, but what seemed like the best choice at the time that would make me happy. This has been my motto ever since. So like Gerald Durrell, I suppose that I have also succeeded in achievements by following a slightly illogical process.

Since then I have made countless other decisions in the same way, and each has led me on another amazing adventure I would never have imagined possible. I have found myself wrapped up in four layers plus a dry-suit, in pouring rain, bouncing over the waves in Scotland whilst dolphins bow-ride our small vessel and I laugh delightedly at the front. I have dangled from cliff-tops to more closely examine sea birds on their nests. I have walked through seal colonies, awash with fighting males and protective mothers to count seal pups for population estimates. I've scanned the dusty horizons of the Mediterranean Sea, willing dolphins to appear on surveys. I've spent six months living in a boat cabin just bigger than a closet to study humpback whales on their annual migrations. I've watched open-mouthed as a blue whale mum and calf dove beneath our 5-meter inflatable, the mum's tail as wide as our boat. I've lived a life that I could never have imagined as a 10-year old child, shivering on the remote coast of Scotland, waiting for dolphins to turn up. Although admittedly, I do still seem to spend a lot of my time waiting for dolphins to turn up.

Of course, I have also had some mis-adventures. Being locked in a forest and rescued by gypsies. Accidentally undertaking a research project on seal behaviour at an unofficial nudist beach, and not realising until I turned up with my 400mm lens and video camera. Suffering from a broken boat engine as our vessel floats into the path of an on-coming ferry. Being attacked by a seal. Falling head-first from a three-storey cliff. Wild weather conditions. And of course, since moving to Australia I've been able to add a number of "dangerous-creature-encounters" to my repertoire of pub stories. So at least you all have a head-start on that one.

Admittedly, on reflection, some of these decisions could have used a little more logic to them. A bit of life experience has taught me when to follow the random path and when to let a bit of logic in. For example, once I had settled on a career in marine science, then joining the Centre for Marine Science and Technology (CMST) at Curtin was obviously a very logical choice! And to be honest, doing a PhD is a whole new adventure in itself.

A lot of people ask me how I maintain a “work-life-balance”. You are always doing things they say – long hours in the field, travelling to different study sites, organising volunteers, staying late in the lab to deal with data. How do you squeeze in the fun stuff, my friends ask. What they don’t realise is that to me, this IS the fun stuff! I love the thrill of discovery! Yes, I spend long days in the field – but that is because you never know what you might see that day! Yes, I spend hours pouring over data – but that is because I long to unlock the secrets those numbers hold. Yes, I have to manage a large team of volunteers and spend time training them – but that is because I enjoy interacting with the next generation of scientists, helping them to gain experience in a subject that I love.

My mother always told me that you either do the work you love, or you work to afford the things you love. I fall firmly into the first camp. But both routes lead to happiness, just in slightly different ways. So I guess the conclusion from that, is to make a mix of logical and illogical choices – both will lead you to happiness, with a bit of adventure thrown in along the way.

I have definitely had an interesting mix of adventure so far. But no matter what the adventure, good or bad, I have certainly always learned something. It is always interesting I think, to look back at the path you have taken. They say retrospect is 20:20 vision, but instead of regretting certain decisions or events, I instead am thankful for all of them. Because they all led to me becoming the person I am today. All those events, good or bad, nevertheless nudge you forward. Sometimes they can seem like the opposite of nudges – a missed opportunity, a failed attempt, a mis-adventure that landed you in trouble... But there are also good nudges – a random meeting, an overheard conversation, a sudden change of plans. And together, the good and bad nudges help you along your journey to where you are now.

And where you are now, is at an Awards ceremony in a respected university, being recognised for an act of excellence.

But the question I put to you now is: what will your next act be? It was Aristotle who said “*We are what we repeatedly do. Excellence then is not a singular act, but a habit*”.

So I sincerely hope that you go forth from today with your heads held high, your hearts open to new experiences, and your souls questing for adventure. I hope that you achieve excellence not just today, but tomorrow, and the next day, until it truly is a habit. I hope that you make a mix of logical and illogical choices, but in doing so make yourselves happy and end up doing things you never could have imagined. After all, this is the time to seize new experiences and seek out your path. And as you do so, remember: million-to-one chances happen nine times out of ten. Thank you.