Applying knowledge, facing challenges

After qualifying from Cambridge, Greg Dickens looked for a job that could support him while he tried to break into international sport. He became an innovation consultant, inventing or modifying new technologies, for which, he says, the skills developed during the veterinary degree are ideal.

BEFORE university, it was, for me, all about insects – I was fascinated by their intricacy, their resilience and their versatility. Interlocking chitin parts could be capable of speed or toughness, of flight or venomous retribution. It seemed that the only thing they couldn’t take in their tiny strides was humanity’s relentless advance. The core of my decision to become a veterinary surgeon stems from that fascination and an intention to make amends through conservation.

The way I figured it, ex situ conservation (zoos and ark projects) had a real chance of keeping biodiversity alive until our species got its environmental act together. But very few zoos were doing invertebrate conservation. I’d either have to put together my own zoo or become someone to whom the management of an existing zoo would be forced to listen. Someone like their own vet.

I picked a vet school where I could intercalate in science and spent my third year immersed in zoology. Slowly, as I studied the evolutionary record and the theories governing their behaviour, it dawned on me that the complexities of mammals and birds were no less fascinating than those of their spineless cousins. They, too, had a million ways to solve a million difficult problems: they just kept them better hidden.

My final years produced electives in fish anaesthesia and primate medicine as well as a lot of EMS at the Durrell Wildlife Conservation Trust on Jersey; at North Carolina Zoo with Ryan DeVoe, and doing biomedical engineering research on the Leadership Program for Veterinary Students at Cornell University. I was also becoming increasingly interested in medical technology and engineering and started putting together projects in my spare time, one of which was an exhibition of photographs taken using algorithms pulled straight out of digital radiography machines. A book of the photographs is still for sale in Cambridge bookshops; it’s always a surprise to see it in the windows.

When graduation rolled around, I was all set to pursue my intended career in conservation vet work, but something came up that caused me to defer it. I’d been cycling to stay sane at vet school and thought I’d take a couple of years to try to break into international-level sport as a sprinter. To fund my rapidly growing carbon-fibre habit, I applied for a job as an innovation consultant with a company called Innova, which specialises in breakthrough innovation and business growth for leading companies.

Innova was as uncertain about hiring a vet as I was about working there, but if I was going to train hard on my bike, I needed more flexible working hours than any veterinary practice would offer, so I pushed for the job. At interview, it turned out that vet training set me up better than expected: questions about flow resistance through pipes (follows radius⁴ – COPD lectures), machinery heat dissipation (think about mammalian thermoregulation) and composite materials (bones and sea shells) almost answered themselves. I found an outlet for my passion for natural mechanisms and started building them into portfolios of ideas for clients all over the world. Furthermore, I discovered that biomimicry would often reduce the environmental impact of the client company’s operations. It was a fascinating place to work.

The cycling went well and when my partner graduated from vet school, I was asked to move up to Manchester to train at the National Cycling Centre. We set up a home halfway between the practice where she had taken a job and the velodrome, and in the mornings we would cycle in our respective directions, her to first-opinion consults and surgery and me to seven hours a day of weights, drills and tactics classes for my two events.

However, ingenuity with epoxy resin can only keep bikes going for so long. In an effort to earn some more money, I started approaching engineering and design firms directly. In every case, they didn’t understand how someone with a veterinary degree would be useful to their business.
In nearly every case, my call or e-mail exchange would end with them asking me to visit their office for further discussion. The understanding of a vet as a living-systems engineer, able to integrate ideas from many different systems to find and fix a problem, is something many people can relate to if you frame it correctly. With the right explanation of the transferable skills, I was able to land a few contracts and upgrade some of my non-sponsored cycling kit.

In the end though, the upgrades weren’t enough. I missed one qualifying time by 0.1 of a second and broke my bike trying to achieve the other at the British Cycling National Track Championships. Frustrated and annoyed, I searched for a way to move on to another goal. Within a month, I had applied for a job leading the veterinary team of a primate conservation charity in the rainforest on the Nigeria/Cameroon border. I took another month to refresh my surgical skills at a Tier 3 hospital in Hampshire, said my tearful farewells and started my long journey into some of the oldest jungle on the planet.

I had been looking forward to the challenge of regrouping a struggling conservation project and providing healthcare for its breeding colonies of endangered monkeys. But for all the heroic surgeries, repairing wounds from hunters or other monkeys, my work just felt like fire-fighting. Catastrophic poverty led to malnutrition and poor housing and, when donated material came in, it was hard to use. There’s no point having bottles and bottles of isoflurane without a filling key.

There isn’t space here to investigate the fate of Nigeria’s primates, but I can illustrate: where I was living, arranging to have someone shot cost about £55 (including police bribes, not including tax). When human life is that cheap, wildlife is given no value at all. My plan to guide a conservation effort fell apart in my hands as we suffered avoidable losses when my team’s recommendations were completely ignored. Corruption blocked us at every turn. I returned to the UK after five months.

Back home, I took some time to consider my options. I still wanted to use my degree to make a real difference to the environment. I decided that my next step forward was back the way I had come.

My day-to-day work with Innovia involves brainstorming, reading a huge number of scientific papers and inventing or modifying new technologies. Veterinary education has given me the skill set to think about engineering and technical problems in a holistic way and find answers that the component experts have missed. The work is interesting, fulfilling, difficult and technical.

When not at work, I give the occasional photography lecture to the University of Cambridge’s photographic society, am posting to The Webinar Vet blog and have written another two books.

Careers built on a veterinary degree don’t have to be a single path. The training allows a huge diversity of jobs and projects, which you can choose to run concurrently or in series. If you’re out of core veterinary business for a couple of years, you are allowed back in, and if you have been in clinical practice your entire life, there are ways out. The degree is vocational, yes, but it is so much more than that. It’s a first class training in how to think logically and how to approach a challenge. This diagnostic, problem-solving approach and our wealth of knowledge about the workings of animals, those living machines of various makes and models, mean that we can fill a huge range of positions well outside our traditional remit.

I’ve been talking to a big oil company recently; it is thinking of moving out of oil and into something carbon neutral. We might be setting up a joint project between it and the US government, which would tear more carbon out of the atmosphere than they released in the first place and, also, might mean that I have to move to Boston. Who knows if that will happen? But if it does, it will have been my veterinary degree that took me there, launched by an initial plan to save the environment and a very large number of insects.

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