Career Sheet: Programme Leader for an Animal Advocacy NGO

LUÍSA BASTOS (Animals in Science Programme Leader, Eurogroup for Animals)

My name is Luísa Bastos. I currently work at Eurogroup for Animals – an animal advocacy umbrella NGO, representing more than 80 pan-European organisations. I am the programme leader for animals used in science, meaning that I am responsible for the organisation's policies in this area. I am a Board member of the European Consensus Platform for Alternatives to the Use of Animals, and of the Centre for Alternatives to Animal Testing. I'm also very honoured to coordinate a working group of Members of the European Parliament that are interested in accelerating a transition to a science without animal experiments.

Before joining Eurogroup for Animals, I was Principal Investigator of the modelling and simulation research group at the Institute of Research and Innovation for Healthcare and Invited Professor at the University of Porto. I have a PhD in Biomedical Engineering, a master's in computational methods and a Licentiate in Applied Mathematics. During my PhD I specialised on *in silico* modelling of human physiology and pharmacology for healthcare education and training. I was technology transfer coordinator and co-inventor of a high-fidelity medical simulator. This simulator is now helping to save patients' lives worldwide.

OVERVIEW OF THE JOB

When I moved from academia to an NGO, I brought together two of my main passions: science and advocacy. At my current job, I don't build mathematical models anymore, but I continue modelling in a way. I build advocacy and policy strategies and put them in practice. Today, my job is to look at the scientific, political, and societal landscapes in the EU, identify opportunities, and define strategies that can help to transition to scientific practices that do not use animals.

One of my strengths as an *in silico* modeler was being fascinated by the overarching picture. I was not only interested in building a model that adequately mimicked the biological event I sought to simulate, but I also sought to understand the history of simulation-based healthcare training, why it was important for teachers and students, and how different audiences see and use it. What did they desire to have in their training environments and why? Where would the technological developments and state of the art discoveries take specific fields of medicine, and what impact could that have on the training needs of future professionals? That made the job extremely interesting and never boring.

Now, instead of linking technology with saving lives in acute medical situations, I link science (including technology) with improving chances of finding cures for diseases, protecting the environment, and for a kinder scientific culture overall. I am in constant contact with academia, industry, policy makers, politicians and civil society and strive to bring together their views, wishes and concerns into proposals that can effectively change the lives of millions of animals in laboratories, by aiding a transition to a

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science without the use of animals, and a science that better delivers on the societal challenges that we are facing.

WHAT INSPIRED YOU

What inspired me to follow this career was part of the modelling work I did during the development of the high-fidelity medical simulator my team and I co-invented. The simulator we built, like those I had worked with before, aims to simulate acute medical events that can, if not managed well, either kill a patient or leave life-long sequels in less than 10 minutes. One event I modelled was foetal asphyxia. As you can imagine, it is not that easy to step into a labour ward or into the scientific literature and find the data necessary to model such a rare and life-threatening event. So, I turned to the studies of foetal asphyxia published in the literature, but for species other than humans, where experiments are allowed. I went through half a century of research and many species – e.g., mice, pigs, sheep, non-human primates. At the end, I had no bridge I could use to translate the results of those studies to model an asphyxia event in a human foetus, and so I ended up using all the clinical data I could find to succeed. That shook me to my core, because I found a profound dissonance between our justifications for conducting studies on animals, and the very low societal impact that those studies had in practice.

It is important to say that in parallel of being a researcher, I was also an animal advocate, and influenced laws and policies on the use of animals for different purposes.

These experiences inspired me to take a deeper look into the policies and beliefs that support the scientific culture that we have in life sciences.

TYPICAL WORKING DAY

I've been doing this job for 4 years and I haven't had a typical year, let alone a typical day. And that's one of the things I love about this job. But I can tell you more about the kind of activities that I do. I work with different teams.

For example, with the staff of Eurogroup for Animals, I work with our political and communications teams to set out and carry out our strategies for animals in science. We may need to seek meetings with politicians, policy makers or other stakeholders; or organise a public event or campaign or just ensure media coverage on a certain topic. I also work with a network of organisations (members of Eurogroup for Animals), where we try to align our EU and national level strategies.

In addition to working within the Eurogroup for Animals network, I have a seat on Boards or Expert groups where academia, industry, governments, and NGOs discuss their agendas to better protect animals used in science.

Together, we seek consensus within the EU to advance a transition to a science without the use of animals, and a culture of care for millions of animals that are kept in laboratories.

STUDY & CAREER PATH

My career path is far from linear and, very honestly, this was not what I envisaged to be doing 10 years ago. This to say that, in my case, as I continue growing as a person, I am lucky enough to always find the way to who I am (or who I become) in what I do.

When the time comes in a person's life to 'choose a path', it's always way too early. I had absolutely no idea what I wanted to be when I 'grew up'. But I had something that differentiated me from – dare I say – all my colleagues and friends – I loved math. Not only did I love math, but I was eager to understand how math could help society; and so, I chose applied mathematics to find that out. After two very boring years with extremely boring teachers, things started to get interesting. I started to learn and apply mathematical skills to help solve problems of healthcare and biology. When the time came to find an internship, I knew I wanted to be a researcher. But not do any kind of research. I didn't want to build robots that play football or serve drinks, as cool as that may sound. I wanted to contribute to saving lives.

Long story short, that was how I ended up choosing the research path that led to my PhD in biomedical engineering and to being part of a very cool team that built a life-saving birthing simulator.

But as I mentioned above, it was not only my studies and professional life that influenced my career. It was also my political activism. It was crucial to my career choice, to the engagement I had with civil society movements, political work and, in general, to my caring about the world, the people, and other animals around me. On top of that, I also engaged very actively in other kinds of learning. I did workshops and courses, for example, on leadership, on practical philosophy, on critical thinking, and animal ethics.

If I could start all over again, how would I change the career path?

I have a million answers to that question, but none of them is good. I could have followed psychology or biology or political sciences or sociology, and I would be doing something else, because only the history I have could have brought me here to do the work I am doing today. Another path could even have brought me to the same organisation. Who knows? But I wouldn't be doing the same job. I wouldn't have the same perspectives. Only who we are, with all the baggage we carry, makes sense when we get to the present.

KEY SKILLS

When one is trying to change a system, thinking critically about the current system as well as the consequences of potential system changes is crucial to be able to strategize. To that end, I also do research, in particular on the impact of science.

Communication, which is important in all jobs in some way, became a major skill to master. I need to truly listen to others, be able to establish wide collaborations between stakeholders, and present the network's views in a compelling way.

In leading and managing a programme in the organisation, I need to develop and negotiate strategies, manage people's expectations, and guarantee that the objectives of the programme are achieved.

The volatile context of this work also requires adaptability, creativity, flexibility, initiative, and time management skills.

And its highly social nature requires openness towards feedback, emotional intelligence, and team spirit.

CAREER PROSPECT

Some of my colleagues are still in academia. Some still linked in some way to health technology, others to robotics, mathematics, and/or programming. Others have followed to work in the private sector, including on medical devices, insurances and finance.

Biomedical Engineering is a very rich field, and every institution, organisation or company linked to health or healthcare have positions that can fit with the profile of a biomedical engineer.

CHALLENGES

As a scientist, the most wonderful challenge I faced when I started this job was understanding the functioning of the EU institutions and, from a blank slate, design a 10-year strategy to achieve goals of the organisation for animals in science.

A continuous challenge is living in a bubble of too much without losing focus. It is easy to pick up on each event that happens and simply be reactive. But, with limited resources, hard choices have to be made. I feel that I am constantly deciding what I will prioritize, and what will have to be dropped for lack of resources.

YOUR ADVICE TO STUDENTS

Do not stress with the choices you make or need to make. I know they feel hard at times, but follow your gut, and know that your choice is not who you will be. It is a step you are taking, hopefully with lots of fun, which will allow you to know yourself a bit more and make other choices as move forward in life.

YOUR ADVICE TO TEACHERS AND PARENTS

For parents: Listen carefully. Be attentive without guiding too much.

For teachers: Be inspiring. Open doors to worlds that your students have never visited. It's important to know what is out there to be able to chose in conscience.

LEARN MORE

To find out more about what I do, visit this page.

To find out more about the medical simulator mentioned in the interview, visit this page.