The Art of Science Communication

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About the author

Dr Spiros Kitsinelis is a physical chemist and researcher whose parallel activity is science communication. He has received a Master's degree from the University of Sheffield in England and a Ph.D. from the same university. He has worked as a post- doctoral fellow at Ehime University in Japan and then continued his research work at the central laboratories of Philips Lighting in Eindhoven, the Netherlands. When he returned to Greece he started a research program at the National Technical University of Athens and he is now working as a research associate at Paul Sabatier university in Toulouse at the south of France. His research work includes numerous publications in journals and international conferences as well as a number of patents.

His science communication activities began after his participation in the international science competition Famelab. He became the first Greek winner and was awarded first prize by both judging committee and audience. Since then he has been writing and presenting to the general public a wide range of topics in numerous ways that include science theater, debates, talks, articles in magazines, short documentaries and books.

Spiros Kitsinelis is a researcher and author. His research publications, other books and media appearances can be found on his personal website ***www.the-nightlab.com***

Prologue

This book is about science communication. It is about how to communicate your ideas effectively, how to capture an audience's attention and how to make it understand what you want to say. But this is not just a book for scientists and researchers who want to address other scientists and researchers. It is also a book that will hopefully help scientists and researchers communicate science in general or their specific research to a wider audience. This wider audience may include the general public (for example families attending science fairs) or colleagues from other departments (with non scientific backgrounds such as marketers and managers). This book addresses researchers of various levels, from students learning how to make presentations to experienced academics who wish to learn new tricks in the art of science communication.

I have structured this book in five parts to cover all possible reader groups and also all possible audiences.

The first part contains advice on how to communicate with various groups. You will find tips on how to deal with the media, different tools you can use on various stages and what to look out for when facing a variety of audiences (from fellow scientists to the general public).

The second part contains examples of how different arts can combine in interesting ways with science, resulting in spectacular projects and science communication successes. Hopefully this part of the book will give you inspiration and will lead you to attractive new ways of communicating your ideas. A project like those we will discuss could make you a household name in your country because in all the examples we will see, some of the people involved enjoyed tremendous success.

Part 3 focuses on the most powerful tool for communication: film. I examine the relationship between films and science and give tips on how one can embark on such a project.

The fourth part contains guidance on how to write scientific and technical documents. The reader will find tips on structuring higher degree theses and journal publications (obviously addressing new scientists) and how to

prepare patent documents, reports, technology forms, proposals etc (addressing even more experienced scientists). Most advices in this part come from personal experience but there are cases where one cannot improvise or follow his instinct as some of the rules (such as in journal articles) are less flexible and specific criteria must be met. By the end of this part you will hopefully be ready for your first publication or a step closer to getting that grant you wanted.

A fifth part is dedicated to aspects of non - verbal communication that will hopefully further improve the communication skills of the reader. This final part deals with a very general topic and at first one might wonder where the science communication relevance is. I believe that including a few pages on this subject will make the readers realize that when it comes to communication every detail can potentially play a big role especially when one deals with a variety of audiences and environments.

The purpose of the book is to inspire science communicators by presenting interesting ideas and projects, to guide by referring to the rules and protocols whenever these exist and hopefully to change the way we think of science communication in order to achieve a quantum leap in the way science and its ambassadors are thought of by society.

I hope that by going through these five parts, the readers (from the students to the experienced researchers) will be better equipped to deal with a wide range of situations. From talking to a non scientific audience of any age group and background to preparing documents for colleagues and employers and from dealing with the media to using and interpreting non verbal signals, this book is giving in a clear and concise way guidance for a large variety of cases.