

Commentary

Taking a Popular Science Approach to the Field of Attention

Stefan Van der Stigchel

Experimental Psychology, Helmholtz Institute, Utrecht University, 3584 CS Utrecht, The Netherlands

Abstract

Over the past few years, I have been actively engaged in informing the public, including policy makers and teachers, about the latest findings in attention research. Despite certain challenges in meeting expectations of both the public and peers, engaging with the public and sharing scientific knowledge not only inspired new research avenues but also highlighted the importance of supporting popular science activities within academia.

In light of our society's current demands, there is an increasing public curiosity surrounding neuroscientific knowledge and its practical applications in everyday life. This growing interest spans across diverse groups, including teachers seeking to enhance learning experiences and office workers seeking effective strategies to cope with daily distractions. Our scientific community has a responsibility to inform the public about our latest and most relevant insights. However, this does not mean that every scientist must undertake this task, as we already have numerous obligations. Over the past few years, I have been dedicated to translating the latest findings in the field of attention into accessible knowledge for the general public. In this article, I will share some of my experiences and lessons learned.

In today's world, capturing and maintaining attention has become a crucial objective for advertisers, web designers, and other "attention architects." They use various tactics, such as large outdoor screens displaying captivating videos, flashing

banners on websites, and computer programs with blinking icons, all aimed at capturing our attention. With the rise of social media, smartphones, and wearables, people are struggling to concentrate. I believe that science can offer valuable solutions to address these issues. To contribute to this cause, I have shared some of these insights through popular science books and various other platforms.

The decision to embark on popular science writing was driven primarily by two primary factors. First, I noticed that many books on attention, though written in an accessible manner, lacked scientific accuracy. These books may be written by individuals with an academic background, but scientific correctness is clearly not their top priority. Second, I was eager to disseminate scientific knowledge about attention to the public and find the appropriate vocabulary to explain fundamental concepts to a broad audience. Writing in an accessible manner is undoubtedly a skill that requires practice and guidance from editors, but it is also really enjoyable. It allows for humor and the freedom to express ideas without the need for constant citations.

While my personal success in popular science writing has been relatively modest, it remains significant. My book on improving attention span may not be a bestseller, but it has helped numerous readers in scientifically accurate ways. I probably could have sold more copies by providing concrete schedules for achieving an ideal work-life balance and enhancing focus. However, this would contradict scientific knowledge, as neuroscience is a complex field with much yet to be discovered. Consequently, I disappoint my audience every time I give a public lecture. Questions, such as "How long can I concentrate?" or "What is the ideal duration for a break?" cannot be definitively answered. We are even unsure whether our attention spans have decreased compared with 20

years ago. However, by explaining that every brain is unique and that providing specific time schedules is impossible, I am able to discuss the important concept of neurodiversity in our society.

Once recognized as a scientist who translates scientific knowledge to a broader audience, you are frequently called on to provide advice on societal issues. For instance, in The Netherlands, there is currently a heated discussion regarding the presence of smartphones in classrooms, prompting the Ministry of Education to seek my expertise after I published an opinion piece on the topic in a Dutch newspaper. Similarly, I have advised policymakers on prohibiting mobile phone use while driving, delivered lectures to high school teachers and students on improving concentration in the classroom, engaged in discussions about open office spaces in companies, and successfully convinced managers of large corporations to allow more breaks for employees to enhance their attention spans. While my own research primarily focuses on fundamental aspects without direct practical applications, it does not preclude me from participating in societal debates. However, this requires a continuous evaluation of the balance between scientific accuracy and accessibility in my statements.

Not only do I occasionally disappoint my audience, but I also face the challenge of meeting the expectations of my colleagues. Communicating scientific knowledge in an accessible manner often requires making sacrifices. When I explain, for instance, the potential benefits of mindfulness on attention spans, I am aware that the evidence is not rock solid and that there are still many unknowns. Furthermore, mindfulness does not work equally well for everyone. Yet, I cannot delve into all the nuances and caveats for every statement, as this would risk losing the attention of my audience. Respected mentors cautioned against

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Correspondence should be addressed to Stefan Van der Stigchel at s.vanderstigchel@uu.nl.

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venturing into popular science writing, fearing it could harm my scientific career. By cutting corners, there is a significant chance that my statements could become scientifically questionable, particularly in brief TV or radio interviews that do not afford much time for reflection.

Striking the right balance between satisfying the audience's desire to listen and meeting the expectations of scientific colleagues has actually been the most interesting and enjoyable aspect of my journey. I advise everyone involved in popular science activities to surround themselves with colleagues who can critique their statements and intervene when those statements deviate too far from scientific reality. Simultaneously, our scientific community should not be excessively critical of

colleagues who engage with the general audience. Cutting corners is inevitable, but I would rather see a colleague on the stage of a popular science festival making slightly oversimplified claims (while being aware of the state-of-the-art scientific viewpoints) than witness an influencer making incorrect statements about the brain.

Engaging with the public and sharing scientific knowledge is not only an enjoyable experience but also a tremendous source of inspiration. The questions posed by the audience often spark innovative research inquiries, leading to new and exciting avenues of exploration. This might sound cliché but holds true in practice. During my explanations of the attentional spotlight, I frequently encounter inquiries

about individual differences in the potential sizes of the attentional window ("Why is my husband almost unable to spot details?"). This previously overlooked aspect prompted me to direct my grant writing toward investigating this question. As a result, my application to the Dutch funding agency (NWO) was successful, opening doors for further research in this field.

It is clear that academia comes with many obligations, and it can be difficult to find the appropriate work-life balance. Recognizing this, institutions should place a positive emphasis on popular science activities and consider them as valuable contributions when evaluating career progress because whenever someone is talking about neuroscience topics in the public domain, it better be one of us.