Chapter 4

Is an Artist a Better Scientist?
An Empirical Analysis on the Impact That Artistic Activity Has on a Scientist’s Achievement

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ABSTRACT

This chapter regards itself with the verification of theses by American scientist Robert Root-Bernstein who through scientific work spanning decades was able to find support for the argument that a successful scientist is more likely to have an artistic avocation than their less successful counterparts. This chapter takes a close look at three studies by Root-Bernstein and goes on to try and affirm his findings by conducting and analyzing interviews with scientists that have an artistic avocation. The results of the study show that art offers an escape for scientists to reorganize their thoughts. Further, if scientists combine the two worlds of art and science, the scientists can directly benefit from their artistic avocation for their scientific work.
INTRODUCTION

To summarize the task of scientists is easy in the first instance. It is the solving of scientific problems. But, from a working perspective of a scientist, this is twofold because it refers to gathering (new) knowledge qualitatively or quantitatively, and it points to outlining the research matters towards an academic audience and students. And from a success-perspective, actually designing, conducting and publishing research asks for a multitude of skills and capabilities. This demand for versatility, multiperspectivity and creativity resonate with the abilities needed to actually realize the fourth industrial revolution and create technologies that fuse the physical, digital and biological world (Schwab 2017, Schwab, Davis & Nadella 2018), automatizing simple task and creating the potential and opportunity to unleash creativity. To foster this potential for further innovation it is essential to investigate successful individuals, like inventors, creatives, artists and innovators. Focusing on successful scientists with secondary artistic vocation we investigate in a qualitative study the phenomenon of modern polymaths, in particular how they perceive their interests relate and whether the artistic vocation fosters their scientific work. Research on polymaths, multiple vocations and scientific success was introduced and popularized by Robert Root-Bernstein.

He studies the linkage between artistic avocation and scientific success. The findings indicate that an artistic performance and production of a person impacts the scientific performance and production of him or her in a positive way. The challenges a scientist faces, such as creating new knowledge, teaching students, and inspire a future generation, experience enrichment in different ways because of the scientist’s art expertise. Thus, if a scientist can develop new skills that impact how he or she teaches, inspires, or expresses knowledge for a future generation it is worth to investigate in this positive combination because this is highly required in the fourth industrial revolution.

And he also found a positive impact of the scientific skills and performance on the artistic activity. Being able to reflect on issues, orientate on critical matters and to express complex issues to less informed individuals are typical scientific skills that foster the artistic avocation. On a broader perspective, people, who have dealt with a variety of different things, do once combine all their findings and create some great pieces of art, such as Leonardo DaVinci or the creator of everything around “Jurassic Park” (Hartford, 2019). Although we teach our children to focus on particular things to improve, engagement in a variety of interests can, in a longer run, create great science and art or, more generally expressed, expertise and perfection and thus inspiration, orientation, and vision.

This chapter contributes to the discourse on the fourth industrial revolution by focusing on how to foster the research and innovation capabilities by studying the
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