World of colors

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2010 *Mathematics Subject Classification.* 78A02

Key words and phrases. Light, Colors

Abstract. This is an introduction to light and colors, with due scientific explanations, kept as elementary as possible. We discuss as well sound, smell, taste and touch.

Preface

Which of your senses would you happily dispose of, if gently asked? After all, there are so many people living with this or that missing sense, and claiming that life is just wonderful. Add to this the cohorts of organ donors, not necessarily related to senses, that's true, or people doing all sorts of dangerous sports, just for fun, again not caring much about losing this or that part of their body. Not to forget professional soldiers, and other mercenaries. And high-risk jobs, too. And many more, there is certainly a long list that can be made here. In view of all this, the question seems to makes sense.

In fact, this is a question that you might already aware of, just browse the social media, and you will certainly stumble upon some tricky questions, of type how much money would be one of your fingers worth, or worse, how much money would be one of your friend's fingers worth. Usually this is the type of sickening question that you run away from, quickly, not enough moderation on these websites, you would say. But, after all, why not, as scientists at least, we should have an answer to everything, right.

In answer, you might be too young, so listen here to the old man, writing these lines. Getting old is not funny at all, and although this is traditionally a well-kept secret, by the billions of people getting older, you should know about it. So, health is what you have, enjoy it, and to anyone inquiring about it, the answer should be an AR-15.

So, happily enjoying our sight, smell, hearing, taste and touch, but, coming as a continuation of the above, after all, which of these senses is the most useful?

Probably sight, I would say, and with this being in tune with the main findings of math and physics, where light and colors are the alpha and omega of everything. We are consumers of color, this is how most of our knowledge builds up. Followed, again from a math and physics perspective, by hearing, and this because sounds have many things in common with light and color. As for touch, and smell and taste, these are respectively a bit too rudimentary, and too advanced, that is, basic mechanics, and then chemistry.

The present book is an introduction to light and colors, with due scientific explanations, and kept as elementary as possible. We discuss as well sound, as a ramification of our main discussion about colors. Smell, taste and touch will be not forgotten either.

The book is organized in 4 parts, with Part I dealing with the generalities of basic physics and light, then Part II and Part III going deep into colors, their meaning, mathematics, classification, applications, and many more, and finally with Part IV going into the other senses, with a discussion mixing basic chemistry and basic biology.

Many thanks go to my math and physics colleagues, and all sorts of other friends too, there is so much to learn about colors, with everyone having their say, usually interesting things, regardless of their scientific or literary background. Thanks as well to my cats, learning from them every day too, and doing some progresses with smell.

Cergy, December 2024
Teo Banica

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Congratulations for having read this book, and no exercises for this final chapter.

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