

Preface

This short book has two chief aims: (1) to offer a concise and informative introduction to some important concepts of photography, and (2) to provide suggestions about inexpensive tools that can help you create interesting and creative images. I was motivated to write this book after giving a series of informal public lectures on photography for members of the University of Waterloo Photography Club, and then subsequently creating a series of 90 second Youtube™ videos (youtube.com/ulufilms) on some fundamental concepts of photography. The videos, in turn, were meant to alleviate the need to give introductory photography lessons each and every school term. This approach was met with a reasonable degree of success, but I still regularly receive emails and comments asking for more information. This book, therefore, is a response to those requests. In keeping with the spirit of both the introductory lectures and online videos, I endeavour to offer concise explanations of the basic technical concepts of photography that you will need to learn in order to use your camera effectively; the discussion here applies equally well, in most instances, to both digital and film cameras. Of course, the introductory nature of this book dictates that much of the highly technical and mathematical considerations beyond the essential core concepts have been omitted for general clarity and brevity. With that in mind, however, there are some basic ratios (fractions) that it will behoove you to learn. For those of you who are scared of math and numbers, photography is, quite simply, both part technical and part creative, so some technical details are unavoidable.

Admittedly, most of the information contained here can be found in other books on photography or on the internet. I make very little claim to originality regarding the technical details; photography, after all, now has one hundred and fifty years of history, and the basic methods of achieving proper exposure has not changed much in that time. Despite the fact that you could trudge through other resources and find similar information, I have found that most books on photography offer either too much technical detail, or they get bogged down in discussing a variety of inessential gadgets and options. What I hope to offer here is a compromise — an introductory guidebook to help get you started in photography, offering just the essentials along with a few cheap tricks. In chapter 1, I provide explanations for each of the fundamental photographic concepts that you will encounter on a daily basis as a photographer. If you are new to photography, however, then it is quite likely that you have recently purchased a digital camera, so chapter 2 provides some additional guidance on key tools and concepts related to your camera. The main topics covered include setting the camera mode dial (aperture priority, shutter priority, and manual modes), metering light, choosing

a file format, and some suggestions for an effective digital workflow. I also make the assumption that you are eager to practise and experiment with different photographic techniques and tools, but do not want to invest in expensive equipment from the outset. In chapter 3 I take that assumption to heart and offer some suggestions about how to create a variety of unique and interesting images in-camera, or with the the addition in-expensive (and do-it-yourself) adapters. Topics here include: cheap macro photography, how to use old film-era lenses on your modern digital camera, how to create interesting long-exposure shots, and some ideas for bouncing and blocking light with commonly available resources. Finally, for anyone with an interest in pursuing flash photography, I have written the last chapter as a concise beginner's guide to using off-camera external flashes.

Photography is a vast subject, and this book is not intended to delve deeply into any given specialization of this field. For those of you who wish to pursue a particular topic further, I have included a list of online and print resources in the appendix. In fact, I am still reading through the wealth of information — technical, historical, and creative — that can be found both in books on photography and online. But I have found that simply reading *about* photography will not mold you into a better a photographer. To improve your photography skills you will have to grab your camera and experiment with various lighting conditions, try different camera settings, and creatively exploit your environment. And then experiment some more, until trial-and-error makes using your camera second nature.

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May 2011.
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1.3 Shutter Speed

Shutter Speed refers to the *duration* of time that light is allowed to strike the sensor. It is somewhat similar to the shutters on your windows at home (also known as “blinds”). Quite simply, if you open the window shutters you allow light to enter the room, and if you close the shutters you stop light from entering (well, assuming that you don’t have any light leaks or other windows). The time that you keep the blinds open is the duration that light has been allowed to enter; likewise, the size of the window — or analogously its aperture! — determines the volume of light that that has been allowed to enter. Your camera essentially has a similar shutter, although the time that it is allowed to remain open is can be set to fractions of a second. For example: you can set the shutter speed to $1/1000\text{sec}$, $1/500\text{sec}$, $1/60$, $1/15$, 1sec , and so on. Some modern digital cameras allow you to set the shutter speed to $1/4000$ or even $1/8000$ of a second, and almost all cameras give the option of leaving it open for 30 seconds or longer.



Figure 1.6: 2 second exposure of a leaf with moving water.

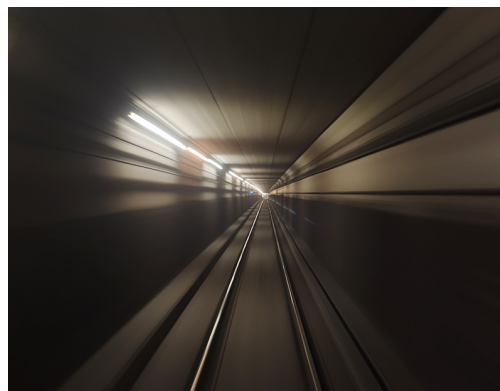


Figure 1.7: $1/2$ second exposure in a Toronto subway tunnel.

The easiest way to set the shutter speed is to use the camera’s Tv mode (i.e., *shutter priority mode*), located on the camera dial; Tv stands for “Time Value,” although some companies use the more intuitive acronym “Sv,” or shutter value. In this mode, you adjust the shutter speed and the camera will automatically adjust the aperture and ISO values to give you a reasonably well-exposed image. It’s as simple as that. I’ll have more to say about camera modes in section 2.2. The alternative method is to set the camera dial to “M” (manual) mode, and manually set the shutter speed, aperture, and ISO values. A light meter is recommended for the latter option; I discuss light meters in more detail in sections 2.4 and 4.1.3.

There are a lot of neat effects you can create by changing the shutter speed and choosing the right subject matter (just use your creativity!). To capture a sense of smooth movement or blurriness you will want to use a slow shutter speed, like $1/2$ second, 2 seconds, or even longer. Figure 1.6 shows the result of using a 2 second shutter speed