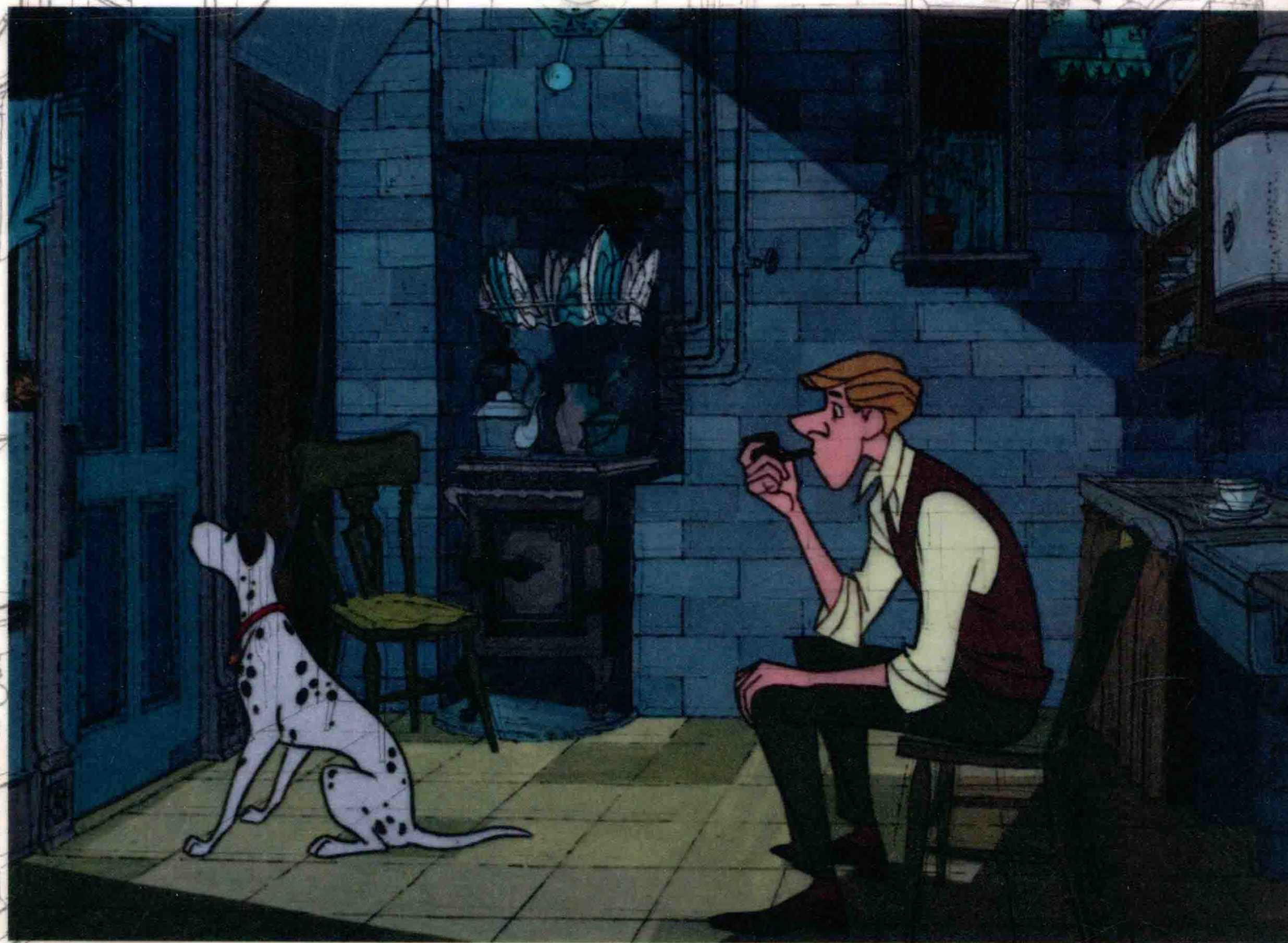


SETTING *the* SCENE

THE ART AND EVOLUTION OF ANIMATION LAYOUT



FRASER MACLEAN

FOREWORD by PETE DOCTER

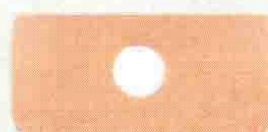
Sec 2 SEQ 3

SETTING *The* SCENE

The Art & Evolution of Animation Layout

FRASER MacLEAN

FOREWORD by PETE DOCTER



— FOR —
Colin, Moira & Ethel

Text copyright © 2011 by Fraser MacLean.
Excerpt from "Maurice Noble (Layout)" on p. 119 from
Chuck Amuck: The Life and Times of an Animated Cartoonist,
by Chuck Jones. Copyright © 1989 by Chuck Jones.
Reprinted by permission of Farrar, Straus and Giroux, LLC.
Henry Bumsted quote on p. 182 from *Screencraft*:
Production Design & Art Direction, by Peter
Ettedgui, copyright © RotoVision SA.
Quote on p. 226 used by kind permission of Michael Barrier.

All rights reserved. No part of this book may be reproduced
in any form without written permission from the publisher.

Library of Congress Cataloging-in-Publication Data:

MacLean, Fraser.
Setting the scene: the art & evolution of animation layout / by
Fraser MacLean; foreword by Pete Docter.
p. cm.
Includes bibliographical references and index.
ISBN 978-0-8118-6987-4 (hardcover)
1. Animated films—Technique. I. Title. II. Title: Art & evolution of
animation layout. III. Title: Art and evolution of animation layout.
NC1765.M28 2010
791.43'34—dc22
2011005945

Manufactured in China

Designed by MacFadden & Thorpe

Front cover: Original ink-line artwork (case) and film still (jacket)
of the "Expectant Fathers" scene from *One Hundred and One
Dalmatians* (1961), directed by Clyde Geronimi, Hamilton Luske
& Wolfgang Reitherman. © Disney

Back cover: Painted background artwork (case) plus ink line and
overlay elements (jacket) from the "Why Should I Worry?"
musical sequence in *Oliver & Company* (1988) directed by
George Scribner. © Disney

10987654321

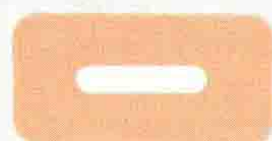
Chronicle Books LLC
680 Second Street
San Francisco, California 94107
www.chroniclebooks.com

— TABLE OF CONTENTS —

| | |
|-----------|--|
| 6 | FOREWORD BY PETE DOCTER |
| 8 | INTRODUCTION: HAND-DRAWN CINEMATOGRAPHY |
| 12 | CHAPTER ONE: "WHAT DO YOU MEAN BY 'LAYOUT'?" |
| 30 | CHAPTER TWO: FROM THE PAGE TO THE SCREEN |
| 52 | CHAPTER THREE: A WORLD ON A PIECE OF PAPER |
| 76 | CHAPTER FOUR: "HOW DO YOU MAKE A MOVIE?" |

| | |
|------------|--|
| 102 | CHAPTER FIVE: "I GUESS YOU HAVE TO DRAW THAT?" THE VIEW FROM THE SHOP FLOOR |
| 118 | CHAPTER SIX: STAGING FOR BUSINESS |
| 146 | CHAPTER SEVEN: THE STORY REEL AND BEYOND REMOVING ALL THE GUESSES |
| 176 | CHAPTER EIGHT: BIG BEAUTIFUL SETS PREVIZ AND THE GROWING WORLD OF DIGITAL COVERAGE |
| 204 | CHAPTER NINE: RIDING THE BOOM SOME THOUGHTS ABOUT CAMERA MOVES |

| | |
|------------|--|
| 239 | POSTSCRIPT: DUMPSTERS AND STATION WAGONS |
| 240 | ACKNOWLEDGMENTS |
| 242 | GLOSSARY |
| 252 | LIST OF INTERVIEWEES |
| 253 | BIBLIOGRAPHY |
| 254 | IMAGE AND ART CREDITS |
| 257 | INDEX |



SETTING *The* SCENE



SETTING THE SCENE

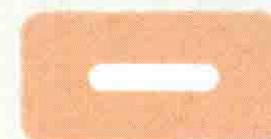
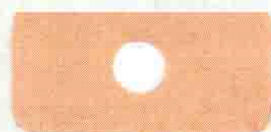


SETTING *The* SCENE

The Art & Evolution of Animation Layout

FRASER MacLEAN

FOREWORD by PETE DOCTER



— FOR —
Colin, Moira & Ethel

Text copyright © 2011 by Fraser MacLean.
Excerpt from "Maurice Noble (Layout)" on p. 119 from
Chuck Amuck: The Life and Times of an Animated Cartoonist,
by Chuck Jones. Copyright © 1989 by Chuck Jones.
Reprinted by permission of Farrar, Straus and Giroux, LLC.
Henry Bumsted quote on p. 182 from *Screencraft*:
Production Design & Art Direction, by Peter
Ettedgui, copyright © RotoVision SA.
Quote on p. 226 used by kind permission of Michael Barrier.

All rights reserved. No part of this book may be reproduced
in any form without written permission from the publisher.

Library of Congress Cataloging-in-Publication Data:

MacLean, Fraser.
Setting the scene: the art & evolution of animation layout / by
Fraser MacLean; foreword by Pete Docter.
p. cm.
Includes bibliographical references and index.
ISBN 978-0-8118-6987-4 (hardcover)
1. Animated films—Technique. I. Title. II. Title: Art & evolution of
animation layout. III. Title: Art and evolution of animation layout.
NC1765.M28 2010
791.43'34—dc22
2011005945

Manufactured in China

Designed by MacFadden & Thorpe

Front cover: Original ink-line artwork (case) and film still (jacket)
of the "Expectant Fathers" scene from *One Hundred and One
Dalmatians* (1961), directed by Clyde Geronimi, Hamilton Luske
& Wolfgang Reitherman. © Disney

Back cover: Painted background artwork (case) plus ink line and
overlay elements (jacket) from the "Why Should I Worry?"
musical sequence in *Oliver & Company* (1988) directed by
George Scribner. © Disney

10987654321

Chronicle Books LLC
680 Second Street
San Francisco, California 94107
www.chroniclebooks.com

— TABLE OF CONTENTS —

6

FOREWORD BY PETE DOCTER

8

INTRODUCTION:
HAND-DRAWN CINEMATOGRAPHY

12

CHAPTER ONE:
“WHAT DO YOU MEAN BY ‘LAYOUT’?”

30

CHAPTER TWO:
FROM THE PAGE TO THE SCREEN

52

CHAPTER THREE:
A WORLD ON A PIECE OF PAPER

76

CHAPTER FOUR:
“HOW DO YOU MAKE A MOVIE?”

102

CHAPTER FIVE:
“I GUESS YOU HAVE TO DRAW THAT?”
THE VIEW FROM THE SHOP FLOOR

118

CHAPTER SIX:
STAGING FOR BUSINESS

146

CHAPTER SEVEN:
THE STORY REEL AND BEYOND
REMOVING ALL THE GUESSES

176

CHAPTER EIGHT:
BIG BEAUTIFUL SETS
PREVIZ AND THE GROWING WORLD
OF DIGITAL COVERAGE

204

CHAPTER NINE:
RIDING THE BOOM
SOME THOUGHTS ABOUT CAMERA MOVES

239

POSTSCRIPT:
DUMPSTERS AND STATION WAGONS

240

ACKNOWLEDGMENTS

242

GLOSSARY

252

LIST OF INTERVIEWEES

253

BIBLIOGRAPHY

254

IMAGE AND ART CREDITS

257

INDEX

— FOREWORD —



OPPOSITE: The young Carl Fredrickson caught up in his hero, Charles Muntz's, story.

Film Still

Up (2009)

Directed by Pete Docter & Bob Peterson

There are several possible reasons that you, the reader, may have picked up this book. Perhaps you are a fan of animation and want to know more about how layout is done. Maybe you are a student, hoping to gain knowledge that will be of value to you professionally. Or possibly you've been accidentally trapped in a walk-in meat locker, and this book is the only thing in there besides frozen flank steaks, and reading it is the only thing keeping you from falling into the icy oblivion of eternal slumber. Of course, if the only non-meat item in there is a book on animation layout, I would suggest there might be something more sinister afoot than a mere "accident." Perhaps there were telltale signs you missed that now, given time to think, will come rushing back to you in a flash of insight. Ah, well, too late.

The good news, regardless of your situation, is that I think this book will satisfy your yearnings. There is a lot of useful information herein, most of which begins after this introduction, in case you haven't already gathered that much.

Here's the thing about layout: it's a lot like an actor on stage. I may have written him brilliantly funny lines, but unless that actor delivers them correctly, the audience won't laugh. They may even throw things. And then they'll say, "What a lousy director," and chase me with sticks. The point is it's easy to kill a great joke, dramatic reveal, or poignant tragic turn if you don't stage it right. And that, my friend, is the job of the layout artist: to protect me from people with sticks.

Which would you rather watch: a great idea told lousily, or a lousy idea told well? If you're like me, you'd go for the second. In fact, I could argue that there is no such thing as a lousy idea if it's told well. (Especially if the idea is about baked beans.)

Well, then, if it's so important, what makes layout "good"? First and foremost, a layout must simply and clearly communicate the information needed to further the story. You'd be surprised how often shots fail at this basic job. Filmmakers tend to get complicated, fancy, or artsy. We get

distracted by the design itself, or caught up in the beautiful color and lighting. But if our image doesn't put across the basic story point, it's not doing its job. Even filmmakers famous for elaborate camera work keep things simple more often than not. Scan through any Alfred Hitchcock films, and you'll notice that complex shots are the exception. And when he does them, they always tell the story.

Early animation layout artists, as well as D.W. Griffith and other early live-action filmmakers, unabashedly studied the Masters before them: Rembrandt, Vermeer, Gustav Doré. These artists realized their images were more than just the objects they captured in paint; they were telling a story, a moment of life frozen in time. Everything in that composition—the placement and size of the characters, the relationship of the figures to the frame and each other—contributes to its meaning. Change one thing and it may mean something else. Layout is storytelling.

Of course, there are numerous elements that go into making a composition communicate. Shape, graphic direction, color, lighting . . . many of these will be discussed in this book. Unfortunately, the ultimate, magical secret to layout will be covered

only in my own upcoming book, *Pete Docter's Ultimate Magical Secret to Layout*. Oops, I promised Fraser MacLean I wouldn't plug that.

Beyond clear composition, layout has another, deeper job: subliminal advertising. What I mean is that a filmmaker often tries to convey a feeling, and attempts to do so in a sneaky way of which the audience isn't even conscious. A phone can ring ominously, a fire blaze joyfully, a staircase can loom oppressively or ascend up hopefully—all done with the layout. The way a subject is presented can be the difference between making a connection with the audience and having them fall asleep.

In movies, facts are meaningless. All we audience members care about is how those facts affect the character. Is it good or bad? We experience the story through the eyes of the protagonist. And the way we do that is through layout. All stories are at its mercy.

Read this book and tell your story well!

—Pete Docter

— INTRODUCTION —

HAND-DRAWN CINEMATOGRAPHY



To date, the history of cinematography has tended to focus on directors of photography (DPs) and lighting camera people working with live actors, either on location or in studio sets. The movie images these people create are a product of lens and light, not pencil and paper. In their world, drawing is a tool of the set designer and the art director. To students of screen craft, then, the idea that cinematography itself can be created by draftsmen may seem a little odd.

But the word “photography” was itself originally created in the late 1830s from the Greek words *photos* (light) and *graphos* (drawing). The resulting, rather poetic notion of “drawing with light” already brings us pretty close to a workable idea of what the pioneers of animation layout were doing by the middle of the following century, but the term “cinematography,” which the Lumière brothers arrived at in the 1890s by introducing yet another Greek word, *kinesis* (movement), rounds out the idea by implying a kind of mark-making on paper that encompasses both light and movement.

The idea of paintings, sculptures, or illustrations coming to life has been active in Western mythology for thousands of years—but it’s worth remembering that, in the wake of Muybridge’s groundbreaking photographic studies of human and animal locomotion in the late 1870s, the very medium of “moving pictures” was first brought before an indoor audience as much by illustrators as by photographers. Artists such as Winsor McCay and Otto Messmer understood, and were quick to exploit, the power of this new technology; it allowed them to breathe life (and shine light) into their sequential “cartoon” drawings, which, until then, had remained trapped in the flat space of a printed page.

The recent proliferation of animated content on television, in advertising, and on the Internet has helped familiarize the world at large with many of animation’s production disciplines, most notably character animation and digital special effects. But even such open access to the “backstage” world has done little to explain the pivotal role of layout in

the commercial animation process. Character and effects animation occupy clear production territories, but the sheer scope of the Layout Department’s responsibilities sometimes prevents us from being able to take it all in.

Even today, layout exists more as an idea than as a department in some smaller animation studios, and where Layout Departments do exist, their importance to the production process is often not fully grasped. As the licenses for 3D computer modeling and animation software have become more affordable, art schools and colleges have begun to introduce animation to the curriculum. But even the more established courses sometimes struggle to convince their students (and even themselves, to some extent) that layout skills can and should be taught.

From the late 1930s through to the emergence of viable commercial competitors in the late 1990s, the Walt Disney Animation Studios enjoyed a veritable monopoly on the production and worldwide exhibition of feature-length animated movies.

PREVIOUS: One animated environment framed by another; “the fatalistic physics of the Coyote’s desert world” as seen on the hero’s own projector screen.

BG painting by Philip De Guard, layout by Maurice Noble
Possibly for a discarded shot from *Road Runner A Go-Go* (1965)
Directed by Chuck Jones

BELOW: The Huntsman attempts to summon the courage to murder an unsuspecting Snow White.

Story sketch with camera framing (or field) guide;
graphite and colored pencil, Disney studio artist
Snow White and the Seven Dwarfs (1937)
Directed by David Hand

OPPOSITE: The Queen, disguised as an old crone, struggles to roll a boulder down the mountain to crush the Dwarfs.

Story sketch; graphite, Disney studio artist
Snow White and the Seven Dwarfs (1937)
Directed by David Hand

In spite of the recent market presence of a profusion of computer-animated features produced by studios other than Disney (or its hugely successful partner studio, Pixar), and even allowing for the dominance at the Japanese box office of the extraordinary films of Hayao Miyazaki’s Studio Ghibli, Disney movies old and new continue to reach and affect a greater share of the global audience than those of any other animation producer.

Whatever developments the medium or the market may see in the course of the next seventy years, nothing of technical or artistic significance has happened (or can happen) in isolation from the unique Disney legacy. Indeed it would be impossible to embark on a meaningful exploration of the layout style of any popular animation property, from Warner Bros.’ *Looney Tunes* through Blue Sky Studios’ *Ice Age* movies, without both reference and comparison to the groundbreaking achievements of Walt Disney Animation Studios’ feature film unit.

While the term “layout” still refers to a well-established collection of skills in most traditional animation pipelines, in the digital realm it can often denote a quite separate, though clearly related, set of skills. Because the terminology and definitions of the layout process have continued to shift even as I’ve been recording them, I have needed and appreciated the help of a great many people in verifying which terms apply only locally within a single studio or pipeline, and which can still be considered universal.

Like any good piece of layout artwork, this book seeks to present all the elements of the story in the clearest possible way. That being said, this is not a how-to book. It doesn’t present or itemize layout rules of any kind, although I believe there’s plenty of room on the shelf for more detailed and personal accounts of the layout process, historical

and modern, written perhaps by some of the practitioners themselves.

Instead, by presenting archive pencil artwork in the context of interviews with artists and technicians, and by including various exposure sheets, camera diagrams, and character staging sketches (along with a detailed glossary of terms),

we sincerely hope that, for the first time, even the casual reader may be able to understand and appreciate the unique contribution made by these creative teams and individuals, not only to the specific animation productions we discuss but also to the universal visual language of popular cinema as a whole.





Dwarfs trapped in path of boulder - Grumpy
"Look out!"



**“WHAT DO
YOU MEAN BY
‘LAYOUT’?”**

The question that comes up more often than any other when discussing the art of layout is, “What do you mean by ‘layout’?” While interviewing the dozens of animation artists and technicians who contributed to this book, sometimes I would ask the question first, at other times the person I was interviewing would begin by asking me for my definition.

One or two of the artists working in layout for contemporary CG (computer graphics) animation studios told me that, in their experience, “layout” was synonymous with “camera” (in the contemporary sense of deciding on the position and movement of a virtual camera); others were keen to assure me that the definition of “layout” in a CG animation studio was closer to what a traditional animation studio would, until recently, have referred to as “scene planning” (see chapter 6).

Preliminary designs for environments and sets are still hand-drawn by concept artists at the pre-production stage in most CG studios, but are not necessarily archived as “layout” artwork per se. At one point, I asked Fox Carney, the tireless curator working with me at the ARL (Disney’s Animation Research Library), whether it might be possible to track down a particularly beautiful multicolored drawing I had seen reproduced in another book, showing the frantic plan of action for Donald, Mickey, and Goofy in a scene from the 1935 short *Mickey’s Service Station*. “Oh,” he told me, “that would be filed under Story Sketch, not Layout.” His response was a reminder that, in place of clear and narrow divisions, there were in fact broad areas of overlap between Layout and each of the surrounding departments.

THE STORY, THE FRAME, AND THE LIGHT

“Before I came here, story and image were separate entities. Now they’re completely connected.”

—Danielle Feinberg, Director of Photography, Lighting at Pixar

I could, I think, be forgiven for getting confused; even within one studio the practice, the

terminology, and the division of labor can vary from production to production depending on which director (or directors) might be in charge of a project and the particular visual medium in which the different departments feel most comfortable expressing and communicating their thoughts, ideas, and plans. Nor has the distinction ever been clear between what constitutes a “3D” studio or a “2D” production, since designers and technicians will inevitably tap into whatever resources, human and mechanical, are available to them in order to achieve the best possible results, as they have done since the earliest days of animation in any of its forms.

It wasn’t so much that I found myself gathering conflicting evidence either, more that I came across an assortment of different threads, some running parallel, some coming to an abrupt end, and others trailing off around corners or becoming hopelessly tangled. Eventually I began to wonder: what, if anything, were the “constants” that all these different artists and technicians had been dealing with for all these years? And, taking all the possible variables into account, I found it was possible to narrow it down to three:

The story, the frame, and the light.

Whether the animated pictures seen by an audience on a screen derive from flat artwork created on a page or from digital geometry modeled in a computer environment, and whether the screen itself is fifty feet across or the size of a playing card, the image itself is always rectangular, and that rectangle is always wider than it is tall. Animation layout, if it can be anchored to any one definition, is the marriage of storytelling and composition; it is the art of placing moving storytelling images within a frame so that they can unfold before us in real time. Our ability to “read” and understand those images within that frame depends not only on bare lines or elaborate rendering, it depends on the play of light and dark and, as layout artist Rob Cardone explained to me, “Lighting is 50 percent of the composition of a shot, and if you’re talking about composition, you’re talking about layout.”

Animation artists from all eras have combined their film work with design and illustration for print, but whereas column and illustration spaces for book, magazine, and newspaper publication can be either horizontal or vertical (that is, “landscape” or “portrait”), to date, cinema, television, game, and Internet screens have all been horizontal in format.

Why? Because we have two eyes and they are arranged in a line, side by side, at the top of our faces. Unless we lie flat or hold our head at a 90-degree angle, we perceive the environment around us in panoramic form, whether it be a tiny attic room or a vast open desert. Although the re-creation of stereo vision for a 3D cinema presentation allows audience members, equipped with appropriate viewing glasses, to believe they are seeing movement beyond the surface of a flat screen, the moving images themselves are still bound by the rectangular parameters of the