# Legibility

## How and why typography affects ease of reading

BOOK MARY C. DYSON

#### **Foreword**

The invention of typography, print, and more recently digitization and the internet brought about an abundance of documents and made the need for legible communication unquestionable. The stakes are as high as the numbers of documents and readers. Professional typographers, graphic designers, UX designers, DTP operators, software developers, casual users of word-processing software, all in one way or another design documents thus affecting their ease of reading. But what exactly is legibility and how can we design documents that are easier to read?

Traditional typographic knowledge based on conventions, technology, and personal or shared experience claims reliable answers proven by generations. Next to this, there has been a growing body of scientific research aiming to provide testable theories to critically assess such answers. Often scattered across journals and scholarly monographs, contemporary research may have been hard to access and digest by non-researchers.

Mary Dyson spent most of her academic life at the renowned Department of Typography & Graphic Communication at the University of Reading (UK). She has dedicated her career to research into reading and typography, writing numerous papers on the subject.

In front of you is a digital version of her comprehensive introduction to legibility. It

updates and extends existing books summarising contemporary legibility research in an accessible form. Available in English and Spanish, under a permissive licence (CC BY-NC-ND 4.0), it is a prime resource on typographic legibility available online. The work is formulated as a textbook encouraging critical reading. The complex research content is divided into *panels* providing additional material or explanation and *boxes* describing the details of experiments.

The project would not be possible without the generosity of the original publisher and editor María González de Cossío from Centro de Estudios Avanzados de Diseño (Puebla, México) and financial support of Google Fonts. The production work for the digital edition was done under the auspices of Rosetta Type with most of the heavy lifting executed by Johannes Neumeier. With further thanks to Sofie Beier, Jeanne-Louise Moys, Carlos Pérez Cerón, Kevin Larson, and Tania Chacana (see acknowledgements).

One cannot understate the importance of its publication online. I believe it will have a profound impact on web typography and typographic discourse online, but it would be just as fine if you find it useful for your thinking, practice, or research.

David Březina, Rosetta Type, April 2023

#### What others say

Typography matters. It can enhance or ruin our reading experience. In this captivating book, Mary Dyson reveals the science and art of legibility, based on her expertise as a cognitive psychologist. Whether you are a designer, a researcher, or a reader, you will find valuable insights and tips in this book.

— Kevin Larson, Principal researcher at Microsoft Advanced Reading Technologies

todo

— Maria Lonsdale, Professor of Information & Communication Design, University of Leeds

Written in a clear and concise manner, this is a book like no other on the topic of text legibility. Mary C. Dyson, an expert in the field, combining vast teaching and research experience managed to produce an engaging and informative work about a complex and challenging topic. The quality content, organised and designed in an accessible style, constitutes a valuable resource and a must-read book for anyone studying, teaching, or practising typography.

— Klimis Mastoridis, Professor of Typography and Graphic Communication, University of Nicosia

## **Table of contents**

## 1. What do we mean by legibility?

Broad definition

Legibility, readability, and related concepts

Why is legibility important?

Functionality versus aesthetics

Evidence for legibility

Summary

## 2. How we read

Rationale

Eye movements

How do we recognise words?

- Word shape re-examined
- Parallel letter recognition
- Word context

Identification of letter features

Reading different typefaces and handwriting

Summary

## 3. Perspectives on legibility

Historical perspective

Research directions

Design perspective

Combining resources across disciplines

Summary

### 4. What is measured and how

Different types of testing and research

#### Challenges

- Key criteria
- Reading conditions
- Material used in studies
- Comparing typefaces
- Illustrating test material
- Familiarity

#### Methods

- Threshold and related measures
- Speed and accuracy measures
- Physiological measures
- Subjective judgements

Summary

## 5. Overview of research: Type

#### Introduction

Screen versus paper

#### Type

- Serif versus sans serif
- Individual letters
- Letter features
- Upper versus lower halves of letters and words
- Upper versus lower case
- Type size
- Type variants (bold and italic)
- Typeface semantics

Summary

## 6. Overview of research: Typography

Introduction

Letter spacing

Word spacing

Alignment

Line length

Columns

Line spacing

Paragraph denotation

Headings

Overall layout

- Identifying dimensions, constructs or variables
- Effects of good and poor layout

Summary

## 7. Beyond legibility research

Broadening the scope

Familiarity revisited

Brief glances at text

Navigation through different menu styles

**Aesthetics** 

The case against legibility | disfluency

Conclusion

Acknowledgements

**Authors** 

Version log

#### Page not found :(

#### Page not found :(