

Second Edition

Childrenswear Design

HILDE JAFFE
ROSA ROSA



Second Edition

Childrenswear Design

HILDE JARFE

Professor

Fashion Design—Apparel

Fashion Institute of Technology

ROSA ROSA

Assistant Professor

Fashion Design—Apparel

Fashion Institute of Technolog

FAIRCHILD PUBLICATIONS
New York

江苏工业学院图书馆
藏书章

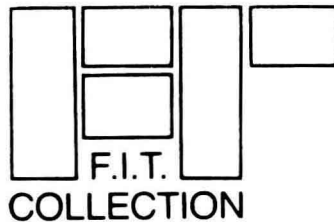
Illustrated by *Rosemary Torre*

Associate Professor

Illustration Department

Fashion Institute of Technology

Designed by *Delgado Design Inc.*



Copyright © 1990 by Fairchild Public
A Division of Capital Cities Media, Inc.

First Edition © 1972 by Fairchild Publications
A Division of Capital Cities Media, Inc.

Second Printing 1979

All rights reserved. No part of this book may be reproduced in any form without permission in writing from the publisher, except by a reviewer who wishes to quote passages in connection with a review written for inclusion in a magazine or newspaper.

Standard Book Number: 87005-706-5

Library of Congress Catalog Card Number: 89-81423

Printed in the United States of America

Preface

to the first edition



Designing childrenswear requires a certain amount of background knowledge and various technical skills along with the intangible but essential innate creative talent that the aspiring designer must have. The purpose of this book is to provide the special information needed by the childrenswear designer to function effectively on a professional level.

Part 1 of the text explores the various areas that form the framework by which childrenswear design is limited. Limitations imposed by size ranges, textile performance and production methods are analyzed. A rudimentary outline of the physical and mental growth of children is presented with emphasis on children's clothing requirements at each developmental stage. Since understanding the needs and the growth of children is most important for the designer, I hope that the relatively sketchy information presented here will serve as motivation for continued interest and further study in this area. The brief look into the history of children's apparel manufacturing should help the designer see her work in the context of a continuously evolving industry that has emerged from the small, individually owned shop into "big business." Finally, I have attempted to show the new designer where inspi-

ration can be found for the fresh, saleable ideas that must appear in every collection to impress the buyers and make the season a financial success.

Since wearable, well-proportioned children's apparel is dependent on the designers ability to express her ideas in fabrics, emphasis throughout Part 2 has been placed on creative patternmaking. Although patterns can be made both by draping and drafting, the usual practice in the childrenswear industry is to work with the flat patternmaking method. I have found that both methods can be used to advantage. New foundation patterns can be draped much more quickly and accurately on the dress form rather than by drafting them from measurements. Also, by draping directly in fabric, it is easier to develop new shapes and silhouettes. On the other hand, once a foundation pattern has been perfected, it is much more efficient to work out variations by flat patternmaking.

Step-by-step instructions are given for each method as it is used to solve individual cutting problems. It is important to note that the problems selected are only those typical of childrenswear. This is not a comprehensive patternmaking book, and the methods used may, at times, seem somewhat unorthodox to the traditional patternmaker of women's wear.

In Part 3, the special problems encountered by designers in particular areas of childrenswear are explored. Since the problems inherent in designing children's dresses are covered in the section devoted to basic patternmaking, there was no need to treat this specialty separately. This, of course, does not deny its importance in the childrenswear industry.

Although the book is primarily intended as a guide to young designers, the garment measurements in the Appendix should also be useful to patternmakers and graders.

It is expected that the reader has had some previous experience in sketching, sewing, draping and patternmaking before specializing in childrenswear design. For the F.I.T. students who use this text, this will not present any problem, since they do not usually enroll in childrenswear classes before the fourth semester. By this time they have acquired an excellent background in the basic skills of design. Others with some previous elementary training should also be able to use this book to learn the professional know-how of childrenswear design.

Although both men and women are successfully designing childrenswear today, the majority of our students are women. Therefore, for the sake of expedience, I shall refer to the designer as "she" throughout the book. I do hope that all the men will forgive me.

The need for a text in childrenswear design has been evident since the introduction of Childrenswear as a course of study at the Fashion Institute of Technology. Nothing on a professional level had been published in this area. Childrenswear designers were trained on the job, and the quality of the training depended on the manufacturer who was willing to hire the novice. At F.I.T. every effort has been made to

establish a curriculum that is grounded on the best experience in industry. This text is in line with this practice.

Where my own personal experience was deficient, other designers readily cooperated to supply the necessary expertise. Particular thanks are due to Barbara Palmer, of Pandora, for her help with the section on sweaters; Estelle Halpern, of Divettes, for her help with swimsuit design; and Annette Feldman, of Immerman Corp., who not only assisted with sleepwear, but contributed a willing ear and friendly counsel throughout.

I would also like to express my appreciation to the experts who are not designers, but who read special chapters and let me benefit from their invaluable experience. Thanks are due to Walter Lilie, for years a production man in the Industry, who read the chapter on production methods, and David Singer, Instructor in Textile Technology at F.I.T., who was particularly helpful with the chapter on fabrics.

To the many enthusiastic students who readily cooperated with the testing of the material in this book, I am deeply indebted. Jo Bidner, who tested the pattern-making without classroom instruction, and Miriam Freilich, who read several chapters, were particularly helpful in providing the student's point of view.

Not only was the material tested in my own classes, but also in the classes of my colleagues at F.I.T., Selma Rosen and Rosa Rosa. They were both unfailingly generous with constructive suggestions. Rosa Rosa, the designer for Tidykins, teaches at F.I.T. in the evening and was most helpful since her concurrent roles as designer and teacher enable her to see problems from both points of view. But most of all, appreciation is due to Selma Rosen, who read and tested just about every chapter of the book, and whose astute criticism and constant encouragement were priceless.

Hilde Jaffee

August 1971

Preface

to the second edition



This new edition of CHILDRENSWEAR DESIGN addresses the many changes that have taken place in the childrenswear industry since the book's original publication. New technology in both design and production is being utilized to a much greater extent. Computers have invaded not only record keeping and control functions, but they are now used to design textiles, embroideries, and original garments. Computers are used as patternmaking and grading tools and computer aided manufacturing is becoming generally accepted in the entire industry. The merchandising of childrenswear has also changed over the years. Licensing arrangements are commonplace and needed to be addressed. Although basic fashions in apparel for children have changed little since the publication of the first edition, children today probably spend more time wearing casual sportswear than they did a decade ago.

Instructions for several new patterns have been inserted. The raglan sleeve, kimono and cap sleeves have been added to the sleeves section. Instructions for hoods, linings, and various pockets have been included in the Outerwear chapter. The section on trimmings for childrenswear has been greatly expanded, and a new chapter on professional samplemaking methods has also been added.

We gratefully acknowledge the generous response of all the wonderful people in the childrenswear industry who shared with us their expertise. Special thanks are due to Ruth Scharf Incorporated, Ed Newman, formerly of Dan River and now on F.I.T. faculty, Diane Specht of Earnshaws, Alan Burgess of Health Tex, David Finkelstein of AGH Trimsources, Larry Moskowitz of Division Embroidery, and Paul Levine of Hirsch International Corporation.

Joe Miranda, our editor, deserves our special gratitude for his patience, good humor, and guidance as we worked on this second edition. But most of all, we want to thank our students who continue to be our constant inspiration.

Hilde Jaffe

Rosa Rosa

December 1989

Contents



Part 1 Background Information

Chapter 1 Size Ranges 3

Infants or Babies 4

Toddlers 4

Children 5

Girls 5

Pre-Teens or Young Juniors 7

Juniors 7

Chapter 2 Child Development and Clothing for Children 9

Infancy 10

Toddlers 11

The Preschool Years 12

Middle Childhood 15

Adolescence 17

Chapter 3 The Industry 21

Historical Beginnings 21

Present-Day Set-Up 23

Seasonal Lines 24

Various Specialties 26

The Manufacturing Process 27

Chapter 4 Out of Thin Air? 35

Fabrics and Trimmings 36

Functionalism 38

Current Fashion Trends	39
History	40
Folk Costume	40
Literature	41
Licensing	42
Merchandising the Line	43

Chapter 5 The Designer as Buyer

Fabrics	46
Trimmings	57
Embroidery	59
Lace	68
Braids	70
Fasteners	73

Part 2 Basic Patternmaking

Chapter 6 Preliminary Considerations

Tools for Patternmaking	84
The Model Form	87

Chapter 7 The Foundation Patterns

The Basic Waist	90
The Basic Shift Without Darts	98
The Sleeve Sloper	104
Transferring Muslin Patterns to Paper	111

Chapter 8 Skirts

The Gathered or Dirndl Skirt	113
The Flared Skirt	115
The Full Circle Skirt	119

Chapter 9 Slacks

Chapter 10 Design Features

The Princess	125
Variations of the Shift	128
Sleeve Variations	132
Collars	150
Style Lines and Other Design Details	161
Buttons and Buttonholes	162
Gathers	162
Pleats	162
Draping in Fabric	169

Part 3 Special Problems

Chapter 11 Infants' Wear

The Basic Layette	173
Clothing for the Growing Baby	181

Chapter 12 Sportswear

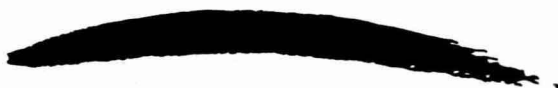
Separates	190
Sweaters	204
Swimwear	205

Chapter 13 Loungewear and Sleepwear	209	Chapter 17 Professional Samplemaking	262
Chapter 14 Underwear	223	Seams and Seam Finishes	262
Chapter 15 Outerwear	229	Assembling a Lined Jacket	263
Coats	230	Pockets	272
Snowsuits and Ski Jackets	234	Simplified Front Placket Opening for Boys' Slacks	278
Hoods	236		
Special Patternmaking Features for Outerwear	238	Appendix	281
Chapter 16 Boys' Wear	249	Measurement Charts for Childrenswear	281
Infants	249	Suggested Sources of Inspiration	292
Toddler Sizes	249		
Children's Sizes	250	Index	295
Trousers	251		
Shirts	256	About the Authors	305

PART

1

BACKGROUND INFORMATION





1 Size Ranges



Most aspiring childrenswear designers have a mental image of the child they are planning to dress. It is usually a bright and charming youngster of uncertain age, with the dimples of a baby, and the unselfconscious grace of the four-year-old, and enough baby fat to give the body a delicious roundness. Of course, there are any number of delightful children who fit this picture. It is important, however, to become aware of what children really look like before attempting to clothe them. The infant is vastly different in appearance from the pre-schooler, and the youngster in kindergarten will go through many changes in physical development before he becomes a teenager.

It then follows that a design which might be perfect for a two-year-old toddler will appear ridiculous on a ten-year-old schoolgirl. In addition, since garments for children should be functional, it becomes apparent as we acquaint ourselves with children at different stages of development that the same outfit does not suit children of all ages. Later, we will explore at greater length the development of children, and how their clothing satisfies some of their essential needs at various stages of growth. For the present, however, let us limit ourselves to the specific problems that the designer and manufacturer face in providing clothes to fit children as they grow from birth to adolescence.

To solve the problems of fit and merchandising as children grow and proportions change, manufacturers have divided clothing for children into several *size ranges*. Each size range consists of a group of sizes for children of similar body proportions and with similar developmental needs. When children outgrow one size range, they proceed to the next one. Sizes, by tradition, have been related to the age of the child. There are however great variations in body build and development so that it rarely follows that a five-year-old wears a size 5. Children vary greatly in height and

weight at any given age because of heredity, nutritional habits, and environmental influences. Both merchants and manufacturers now tend to view the numbers in each size range merely as symbols and use height and weight ranges on the hang tag of each garment as a better guide for the consumer.

Let us now examine each size range and determine the distinguishing characteristics of each.

■ Infants or Babies



The garments in this range are for the baby from birth to the time when he begins to walk alone, at about one year. In infancy the child's head is large in proportion to the rest of his body. It is approximately one fourth of his entire body length. The infant grows at a rapid rate during his first year. Although the average newborn weighs about 7½ pounds and is 20 inches tall, he almost triples his weight and his body length increases over one third by the time he is a year old. Because of this swift development, sizes for garments change quickly, and the dress or sweater which seemed much too large for the baby is often outgrown before it is tried on again.

The sizes in this range are: 3 months, 6 months, 9 months, 12 months, and 18 months; or Small, Medium, Large, and Extra Large. In preparing models for this size range, the designer usually works in a size 12 months, the sample size, because it is typical of this range.

■ Toddlers



The Toddler size range fits the child after he has learned to walk, until he is about three years old. During this period, general growth is not as spectacular as during infancy, but the arms and legs develop considerably. The legs become straight, and strong enough to support the body weight easily, and the arms become comparatively longer. The head of the child grows slowly in relation to the rest of his body, and the toddler does not seem quite as top-heavy as the infant.

The stance of the young child is different from the posture of the adult. The spine seems to curve in, producing what is called a swayback, and the stomach almost always protrudes. This baby stance sometimes continues into adolescence, but more often it disappears during the early school years. Clothing for this size range must still be designed with adequate fullness to accommodate diapers, for toilet training is usually not complete until the child is two and a half to three years old. At that point they usually move on to the next size range.

Toddlers sizes are: 1T, 2T, 3T, and 4T. The "T", which stands for toddler is used to avoid confusion; size 3 and size 4 appear again in the next size range. Sample size is 2T.

Children



This is the size range in which most designers love to work. Here, children are encountered who are still charmingly unselfconscious, but old enough to be fashionable. These are the youngsters of preschool age, from about three to six years. Their physical growth continues at a gradual, steady pace during this period. The average five-year-old child weighs 42.8 pounds and is 43.6 inches tall. His body is beginning to assume adult proportions and his legs grow rapidly; his trunk develops more slowly; and the size of his head changes very little. There is as yet no indication of a waistline, and the baby stance is still strong.

Sizes are: 3, 4, 5, 6, and 6x. Size 6x is larger than size 6 and of similar proportion. It has been a transitional size, filling the gap for some children before they fit into size 7 of the next size range where proportions gradually change. Some manufacturers have eliminated size 6x and have adjusted the body measurements for sizes 5, 6, and 7 so that they reflect the actual growth patterns and gradual changes in proportion of the child. (See Appendix, page 287.)

Until this stage, both boys' and girls' wear are manufactured in the same size ranges, often by the same manufacturer. There is one exception. In the Children's size range, Boys' sizes are 3 to 7. There is no size 6x for boys. For the school-age child, however, size ranges and manufacturing techniques diverge. Boys' wear assumes the same styling and production methods as men's wear and, therefore, steps out of our present discussion. From school age on, we shall limit our studies to clothing for girls.

Girls



This size range is for the grade-schooler, usually the child from seven to ten years old. Growth continues at a gradual pace, but there is now a difference in the general appearance of the child; much of the baby fat decreases and is replaced by muscle tissue. For many girls, this is an awkward age, the stage between baby appeal and the eventual blossoming of young feminine proportions. There is a definite slimming and lengthening of the torso and limbs, but as yet none of the curves of adolescence.

Sizes are: 7, 8, 10, 12, and 14. Size 14 is often eliminated by manufacturers because changes in dietary habits have made the chubby, shapeless ten- or eleven-year-old almost nonexistent, and by the time the girl is twelve years old, she usually prefers to wear clothes from the Pre-teen or Young Junior size range. Some of the large mail-order houses, on the other hand, have requested manufacturers to size some garments from size 7 through 16. Such a long, continuous range is particularly appropriate for standard items, such as shirts and jeans that are fashion-right for all ages. Product standards, developed by the United States Department of Commerce, have supported this practice. Taking into consideration the proportional growth of the school-age girl, as determined by a survey conducted by the Department of Agriculture, standard body measure-

ments have been developed for sizes 7 to 16. (See Appendix, page 288.) When the size range is 7–12, the sample size is size 8; for 7–14 or 16, the sample size is size 10.

There is a limited market for a 7–14 Chubby size range. The large mass retailers usually carry a small group of these garments. These garments are cut decidedly fuller for the girl who is overweight for her height. In designing for the chubby customer it is important to carefully proportion design details to achieve a slenderizing effect, but it is even more important to remember that the chubby girl will want the same fashion items that all the other girls are wearing.

