

Fancy yarns

***Their manufacture
and application***

R H Gong and R M Wright



The Textile Institute

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Contents

	<i>Foreword</i>	vii
	<i>Preface</i>	ix
	<i>Acknowledgements</i>	xiii
	<i>Comments and credits for the colour plates</i>	xv
1	Introduction and background	1
1.1	Definition	2
1.2	Purpose and scope	3
1.3	Methodology	3
2	Historical development	5
3	The size of the market for fancy yarns	9
3.1	Introduction	9
3.2	Starting the successive scenario technique	12
3.3	The method of the successive scenario technique	15
4	Manufacturing attitudes and the applications of fancy yarns	22
4.1	Manufacturing attitudes and equipment	22
4.2	Applications for fancy yarns	23
5	Introduction to fancy yarn structures, and analysis of fancy yarns	29
5.1	Introduction	29
5.2	Analysing yarns	30
6	Structures and formation of fancy yarns	33
6.1	Marl yarn	33
6.2	Spiral or corkscrew yarn	34

6.3	Gimp yarn	35
6.4	Diamond yarn	36
6.5	Eccentric yarn	37
6.6	Bouclé yarn	38
6.7	Loop yarn	40
6.8	Snarl yarn	43
6.9	Mock chenille yarn	44
6.10	Knop yarn	45
6.11	Stripe yarn	46
6.12	Cloud or grandrelle yarn	47
6.13	Slub yarn	47
6.14	Nepp yarn and fleck yarn	50
6.15	Button yarn	51
6.16	Fasciated yarn	53
6.17	Tape yarn	53
6.18	Chainette yarn	55
6.19	Chenille yarn	55
6.20	Cover yarn	59
6.21	Metallic yarn	59
7	Manufacturing techniques	60
7.1	Overview of production processes	60
7.2	Yarn production systems	62
7.3	Yarn and fabric trials	87
7.4	Future developments	90
8	The design and application of fancy yarns	92
8.1	Introduction	92
8.2	The design implications of fancy yarns	92
8.3	The use – or not – of luxury fibres	94
8.4	Intellectual property in design	95
8.5	Uses for fancy yarns	97
8.6	New yarns, new fibres, new ideas	99
8.7	The retail potential of fancy yarns	100
8.8	Retailing	100
8.9	Apparel fabrics	102
8.10	Furnishing fabrics	108
8.11	Designing the yarns	110
8.12	The design of fancy yarns using computers	113
8.13	Designing fabrics using fancy yarns and fancy doubled yarns	116

9	The marketing of fancy yarns	126
9.1	The market size and form	126
9.2	The markets available and marketing techniques employed	127
9.3	Historical evidence for the status of fancy yarns	130
9.4	The challenge of marketing	131
9.5	Management and marketing issues as they affect the fashion and fabrics industries	133
10	Conclusion	144
	<i>References</i>	145
	<i>Bibliography</i>	146
	<i>Index</i>	149

Foreword

Since I am an established supporter and advocate of the value to the industry of creative textile design, I welcome the opportunity to endorse the motives for publishing this textbook. Further, it is as a friend that I make a generalised criticism of the failure of many textiles and fashion courses seriously to introduce students to the design possibilities inherent in fancy doubled yarns.

Readers of this volume will gain an appreciation of the long history of manipulating and combining threads to achieve fancy effects in textiles. They will also have some understanding of the many ingenious machines devised in the past to exploit these effects. Noticing the recent impact on High Street fashion of the once exclusive chenille yarns, and wondering how this exotic was transformed into a commodity, they may find the answer here. Better still, they may be inspired to identify other effect yarns from the past which would be welcome in the contemporary fashion scene, and apply modern means to their economical production.

It is my hope that the knowledge painstakingly composed within this book may stimulate a dialogue between designers of textiles and spinners of yarns, which will be fruitful to each of them and to their customers.

*Peter Craig Byrom OBE, B A, C Text., F T I
Senior Fellow R C A, F R S A*

Authors' note: This book would not have been written if we had not been made aware that students and professionals in the field of fancy yarns have no general work of reference to which they can refer. This first became clear during a project supported by Peter Byrom during the late 1990s, and it was for this reason, and because of his considerable experience in the textile industry, that we have asked him to write a Foreword to this book.

In a working lifetime in the textile industry, from 1952 to date, Peter Byrom's manufacturing experience has included the production and marketing of cotton yarns, bulked continuous filaments, fancy woollens, worsteds

and silks. During his membership of the Council of the Textile Institute, he served as Chairman of the Activities Committee. He was awarded the OBE in 1987 for services to the Royal College of Art. Throughout his career in the industry, he worked as consultant, governor and moderator with very many textile design colleges and universities, and within the design initiatives of the Royal Society of Arts.

The graduates of these colleges have been major contributors to the success of the manufacturing and merchanting companies with whom Peter has worked, and as a pioneer of 'design-led marketing' in the 1960s, he was instrumental in creating a design studio employing over 60 textile and fashion graduates, which achieved a Queen's Award for the export of textile design. This combination of interest and experience, we felt, made him the obvious choice to introduce our work to those who might be expected to receive the greatest benefit from it.

Hugh Gong and Rachel Wright

Preface

In recent years, there has been a very marked increase in the interest in and applications of fancy yarns and fancy doubled yarns, and these yarns now have considerable commercial significance. This is the case even though they form a relatively small volume of the overall textile fibre output of the world. This volume is estimated to be about 1% by weight of the mill consumption statistics, and in 1998 the value of the European market was estimated to be around £500M. The motto of the Textile Institute 'All human life hangs by a thread' (*Omnia sunt pendentia filo hominum tenui*) demonstrates that organisation's appreciation of the universal and interdisciplinary nature of the textile world. But Shakespeare's remark that 'the web of life is of a mingled yarn' is of more direct relevance to our concerns, since fancy yarns and fancy doubled yarns are essentially 'mingled' as a result of their physical characteristics. This book will discuss the 'mingling' of the many varieties, their modes of manufacture, and the design and marketing implications that result from their use.

An increase in the general appreciation of the design and marketing opportunities opening to the fancy yarns sector has also become apparent recently. This increase has been driven mainly by the prominent design houses. The trend has had a variable application in place, time, and market sector, and there are a number of reasons for this variability. There is a prejudice frequently expressed by some spinners that fancy yarns of any description are troublesome and difficult to manufacture, and that they divert time and attention from other matters. There is also the point that the combination of budgetary and time pressures on the many university and college departments offering courses for textile students, together make it difficult to give any considerable allotment of study or workshop periods. In addition, lecturers and instructors in universities and technical colleges have, until now, been commonly of the age to be most strongly influenced by the prejudices that see fancy yarns as time-consuming and irrelevant. We feel that this is resulting in an undesirable restriction in the range of information available to students and spinners. Therefore, this book attempts to

address these prejudices, and to mitigate the restriction of information. We are aware that these pressures on time and money make it more difficult to assemble a library, or a hand-selected dictionary of fancy and fancy doubled yarns for every student. The production of this basic textbook covering the topic should reduce considerably the burden on lecturers and students alike. The many illustrations – of machines, yarns, fashion and fabrics – are intended to offer an elementary introduction to the manufacturing techniques now in common use and to the varying application of fancy and fancy doubled yarns. Our objective in developing this book is to create a work of reference that will offer support to both the student and the worker in the textile industry. Although this offers a broad topic in itself, it seemed that the discussion of the manufacturing techniques without some discussion also of the applications of the product would tell only half of the story, in particular when we consider that fancy yarns and fancy doubled yarns make their greatest contribution in the essentially ephemeral matters of fashion and style. We therefore seek to offer as well, a general overview of the market for fancy doubled yarns and novelty yarns as it is seen today.

This book falls naturally into four sections: the first, comprising Chapters 1 to 4, deals with the background and historical development of fancy yarns, together with an introduction to their applications. In this section we discuss the basic matters relating to our definition of a ‘fancy yarn’, give a brief overview of the historical progress of fancy yarns from the earliest archaeological records to the present day, and conclude with a discussion of their place in the present textile industry and markets.

The second section, Chapters 5 and 6, concerns fancy yarn structures. The variety of structural effects that are to be found in fancy yarns available today is described. It is illustrated with yarn diagrams and pictures of yarns in order to aid the student in identifying the basic yarn structures and types.

The third section comprises a single chapter, Chapter 7, dealing with the manufacturing techniques employed in the creation of the structural effects covered in the previous section. Again, diagrams are included to demonstrate the particular methods outlined in the text.

In the final section, Chapters 8 and 9, we attempt to offer an insight into the many issues to be confronted in the industrial creation of fancy yarns for commercial customers. These include the effect of external developments on management and marketing techniques and concerns, the effect of the particular market level targeted and the influence of the catwalk on High Street fashion.

Throughout this work, it should be recalled that we are discussing a product that, far from being a ‘commodity’, instead offers the designer an opportunity to create some truly unique fabrics and garments. It seems clear to us that the marketing dimension – especially in terms of the future –

merits as much attention as that granted to the discussions of the mechanisms that already have been, or that may be, devised to produce those yarns. However, the yarn structures, and the machine parameters and their characteristics, and the properties of the yarns they produce, will be described before we consider these matters, which are less closely related to the technical reality of creating a useable yarn.

Acknowledgements

A work such as this, which essentially aims to bring together the available knowledge of a particular subject in a single place, necessarily involves the authors in discussions with a large number of people. It would be impossible to mention all of them, but some in particular deserve to be publicly thanked. To those named below, and to the many others who helped us, each in their own way, our grateful thanks:

Peter Byrom, OBE – without whose encouragement we should never have attempted the project, and who has written the Foreword.

Rodney Brook and Mick Cresswell, of Spectrum Yarns Ltd, Slaithwaite – for offering advice and assistance on a number of occasions, and for permission to use some of their yarns in illustrations.

Edwina Ehrman, of the Museum of London – for her enthusiastic support of our research into the historical background of fancy yarns and for providing a number of useful contacts.

Tracy Finch, of Paul James Knitwear Ltd, Leics. – for an introduction to commercial knitting and for permitting our use of garments and fabrics as illustrations.

Toby Gaddum, of HT Gaddum and Co. Ltd, yarn agents in Macclesfield – for sharing his wide knowledge of the current market in the United Kingdom and for providing us with many additional contacts.

Clive Mapp, of Du Pont UK Ltd, Gloucs. – for a fascinating introduction to modern airjet texturing.

Peter Moroz, Ivor Warren and Les Downes of the Department of Textiles, UMIST – for their assistance in undertaking the yarn and fabric trials.

Stephen Thornber, of JT Thornber Ltd, Clitheroe, Lancs. – for many enlightening conversations, and for permitting us to use images of some of the fabrics of his mill to illustrate our work.

Ann Wilson, of Wilson Estella, London – for the loan of fabrics and garments, and for her insight into textile design, both as it is taught and as it occurs in commercial applications.

Dr Daniel Yu, of the Department of Textiles, UMIST – for his invaluable assistance in the photography of yarns and fabrics to illustrate this work.

Comments and credits for the colour plates

The colour plates can be found between pages 80 and 81.

Plate 1 Yarn samples and historical applications

Detail of blue and pink silk brocade sack-back dress, showing floss silk embellishment. Courtesy of the Museum of London.

Detail of Tudor glove, showing metallic thread embroidery and embroidery with hair. Courtesy of the Museum of London.

Details of various yarns, shown to allow comparison of the historical details with modern chenille yarns and metallic yarns. Yarns from the collection of the authors and other yarns courtesy of Linton Tweeds Ltd.

Yarn A – curly ‘chenille’ yarn made on the tricot system, creating a ‘knit-deknit’ effect in the pile.

Yarn B – sparse chenille produced on the chenille machine, showing the direction of the nap.

Yarn C – Plain chenille, also made using the chenille machine, using a two colour pile.

Yarn D – Chenille-type yarn made on the tricot system, including a slit film in the pile and then doubling with a filament yarn to create a rounded yarn with a scalloped effect.

Yarn E – Metallic tape yarn, showing the addition of a plain filament yarn for support. Clearly it could also be dyed to produce different overall colour effects.

Yarn F – Metallic snarl yarn, showing that the metallic thread has been doubled with another to support it and create the form of the yarn.

Yarn G – Metallic complex bouclé, which shows two space-dyed yarns and a metallic slit film fed together to create the effect.

With thanks to:

The Museum of London, London Wall, London, EC2Y 5HN.

Linton Tweeds Ltd, Shaddon Mills, Shaddon Gate, Carlisle, CA2 5UA.

Plate 2 Furnishings

Picture of interior, courtesy of Romo Fabrics Ltd.

Picture of throws, courtesy of Romo Fabrics Ltd.

Details of fabrics provided by James Thornber Ltd.

Fabric A – golden chenille fed in as weft in a jacquard pattern, creating an alternation of both colour and of surface sensation.

Fabric B – cream fabric including slub yarn in the weft. Again, the fabric has a jacquard pattern, so that the surface alternation of the design is supplemented and enhanced by the effect of the slub yarn.

With thanks to:

Romo Fabrics Ltd, Lowmoor Road, Kirkby in Ashfield, Nottingham, NG17 7DE (www.romofabrics.com).

James Thornber Ltd, Holmes Mill, Greenacre Street, Clitheroe, Lancs., BB7 1EB.

Plate 3 Woven apparel fabrics

Detail of fabrics provided courtesy of Linton Tweeds Ltd.

Detail of fabrics from the authors' collections.

Jacket shown courtesy of Linton Tweeds Ltd.

Dress from the collection of R M Wright.

With thanks to:

Linton Tweeds Ltd, Shaddon Mills, Shaddon Gate, Carlisle, CA2 5UA.

Plate 4 Knitted apparel fabrics

Detail of intarsia knit cardigan supplied by Wilson Estella, London.

Detail of garments supplied by Paul James Knitwear Ltd.

Detail of fabric from the authors' collections (navy slub).

Detail of fabrics supplied by Paul James Knitwear Ltd.

With thanks to:

Wilson Estella, 28–30 Coronet Street, London, N1 6HD.

Paul James Knitwear Ltd, 13 Hill Street, Barwell, near Hinkley, Leics., LE9 8BJ.