NATIONAL COLLEGE OF ART AND DESIGN

FACULTY AND DEPARTMENT – Fashion and Textiles/Fashion

TITLE – "SIZE 12?: The Confusion Behind Women's Clothing Sizes".

BY – Amy Fenning

Submitted to the Faculty of History of Art and Design and Complementary Studies in Candidacy for the Degree of Fashion Design.

NAME OF DEGREE – Fashion Design

YEAR OF SUBMISSION – 1999

Thanks to Mr. Willie Donnelly, Linda Byrne and Mr. Len Boxall for their knowledgeable insight into the topic I was researching. Thanks also to Michelle Treacy, my fit-model.

TABLE OF CONTENTS

LIST OF PLATES

INTRODUCTION

"She's a perfect 10 but she wears a 12. Baby keep
a little 2 for me. She could be sweet 16, bustin' outta
the seams. It's still love in the first degree"

These lyrics from the Beautiful South's 1998 hit song "Perfect 10" proves that the issue of women's clothing sizing is something that is very topical at the moment. Obviously the words size 10, size 12 and size 16 are used to illustrate the depth of the songwriter's love for the woman in question. On hearing this song, an image of three sized bodies is envisaged by most – especially women – due to the heightened awareness of clothing size and it's importance today. Why the woman in this song wears a size 12 if she is a "perfect 10" is the question which will be discussed and attempted to be answered in the following chapters.

" Women love to shop !"- this phrase is said regularly, especially by men, as if it were fact. The reality is that many women cite shopping, in particular clothes shopping, as one of their least favourite pastimes. The result of such an activity may be pleasurable when you finally find *the* black dress. It is the process involved in finding this "little number" that can almost be described as soul destroying. This is due in great part to the confusion and frustration felt by most women when trying to choose the proper sized clothing for their figure types.

Fluorescent lights in the dressing rooms washing out the complexion, a more attractive fellow shopper in the next cubicle and the added confusion of what size garment to try on in the first place, turns "treating yourself to something nice" into a

type of torture. The quest to find clothing that both fit and flatter the body can be long and extensive and in the most part, a case of trial and error. After a day of shopping to find clothing to fit your individual size and shape, your confidence and self-esteem may be as deflated in size as your wallet. Most women will empathise with the feeling of dejection and confusion that's felt on emerging from the fitting rooms, laden down with garments in varying sizes, realising not one fits.

The following chapters attempt to examine why this is the case. The origin of the sizing system and size designation system that is used in today's clothing manufacturing industry is outlined in the first chapter but, the developments that have affected both the system and the female body to which it is applied need further analysis. The question that is asked is whether there is a true size 12 body or garment existing in reality and why, if such a question needs to be asked, there is still a system in use that refers to these standards.

Much of this information is reliant on references from pattern cutting manuals by tailors and other authorities on the subject of garment sizing and construction. I have also interviewed designers and tailors actively practising their trade in today's clothing industry in order to chart the progress of the historical sizing systems to the one presently in use.

To conduct a "real" experiment into what is a true size 12 garment, I undertook the task, (with help of a fit-model) of trying on numerous garments belonging to different market levels, from different countries of origin and aimed at a cross-section of customers. This primary method of collecting information means that the results were real, tangible and up-to-date and are discussed in chapter two.

Clothing sizing is not just a simple matter of garment and body measurements and their relationship to each other. Because the female body is not just an anatomical object but a cultural construction, clothing sizing has became an integral part in the language of the body which also includes posture, gesture, movement, dress and cosmetic alteration.

CHAPTER ONE – The Need for Sizing.

A universal sizing system, that dictates body and garment measurements, wasn't something that was considered necessary before the turn of the century. Why should ladies clothing be catergorised in such a way,when the majority of well-to-do women had their clothes custom made to fit their figures perfectly? The woman in ill.1 is attired appropriately to partake in the informal activity of walking. Yet, it is obvious that great attention was given to the construction of such an outfit so that the garments mould to her body in such a way that today, for a leisure outfit, would be considered very restrictive.

It was the less well-off in society who were neglected, by only such expensive custom made clothes being available for those who were wealthy enough to afford them. The working group in ill.2 were dressed in functional clothes, with big aprons worn over their skirts. Their blouses were loose, unfitted shapes and tucked into their skirt waistbands. There was little attention given to how well these garments fitted to the body. Their clothes were probably home produced to be worn primarily as vaguely fashionable working clothes, where ease of movement and practicality were the primary concern. For people like these, fitted dress in the form of made-to-measure outfits was inaccessable financially and would be impossible to wear and work in.

When the realisation happened that this substantial sector in the market was a potential for profit, it posed the question of how to clothe the masses succesfully/profitably ? Ready-made clothing in a selection of garment sizes to suit the majority of the population seemed to be the path to travel as the circulation of these "off-the-peg" garments was rapidly growing at the turn of the century. How

ill.1 -Woman in Walking Attire (1893)

ill.2 -Women in Whitby Fishing Town (c1904)

ill.3 -Picture of an "*Unmade*" Dress

were the sizes of these garments to be determined, named and regulated ? Establishing this selection of sizes (codes and measurements) to suit the majority, proved a difficult task and is still in the process of arriving at a conclusive answer.

From as early as the first half of the 19th century, ready to wear mantles, cloaks and shawls were on sale, but there was no question of sizing as "one size fits all" with these garments. Many clothing manufacturers, while still relying on tailored clothing for the bulk of their business, offered a "not quite ready to wear" alternative. This was in the form of a partially constructed dress that could be altered to fit by an in-house dress-maker. In 1906 a UK store catalogue offered a "handsome lace robe in ecru or ivory, including full material for a bodice (Ewing, 19 P.36)" (see ill.3). The bodice piece would be incorporated into a well fitting bodice after a fitting consulation in store. Skirts were also made with the back seam undone to allow for different customers varying measurements and could be sewn up accordingly.

This does not sound anything like the off-the-peg garments we buy today, but it was an advancement on the couture style crafting of individual garments for individual customers that was the normal practice. In his book, *"The Theory of Garment Pattern Making"*, W.H Hulme, an authority on such tailoring practices wrote,

> In the 17th century, tailors in busy ports like Bristol, kept a stock of ready made clothing for those maritime customers who had not the time in port, to wait for finished garments. The normal way was to be measured and await the tailors pleasure (Kunick, 1984. P.1).

Tailoring and dress-making was the backbone of the clothing trade in the centuries preceeding the 20th century. Each individual tailor was a craftsperson first (belonging to a Guild), who followed an established method of making clothes and a 'mass-manufacturer' of clothing second. This meant that the technological

innovations, such as the universal sizing system broke with the tradition of individual size charts and was not readily accepted as a credible modern alternative.

These size charts differed from tailor to tailor and as the 20th century approached many charts were published and the discrepancies between them became plainly obvious (ills.4&5). Both of these charts contain a list of measurements taken from the female body at the beginning of the century but, on observation, these charts bear little resemblance to each other in terms of the number of measurements taken and from what points on the body. As the differences between these charts are so great and the resulting measurements so varied, they cannot be used as comparable sources of information needed to create a sizing system.

Many stores in Britain such as *Debenhams* and *Freebody's*, kept customers patterns and sizes on file, yet this was still elitist and only really applied to those who could afford to be measured and fitted for the original garment. These measurements were taken from just one person therefore, couldn't be used to produce a garment to fit another customer.

The UK clothing trade was gathering pace and eager for technological progress, to advance the production of ready to wear garments (known as wholesale couture in Britain), that were appearing at the time in the United States. The quest for this standard sizing system to benefit modern manufacturing industries, began in earnest at the turn of the century with many authorities on pattern making and production tackling the issue.

The issue in question was the creation of a sizing system that, using the relationship of bust, waist and hip measurements of the female body, establishes coded divisions of measurements. The aim of such a system was that within these

ill.4 -W.D. Vincent's Size Chart

Scale of Measurements for Females (inches)
by W. D. F. Vincent about 1892

Chest girth	24	26	28	30	32	34	36	38	40	42	44
Waist girth	24	24	23	23	23	24	26	27½	29	31	32½
Depth of scye	5½	6	6½	7	7½	8	8¼	8½	8¾	8¾	9
Nape to waist	11	12½	13½	14	14½	15	15½	15½	15¾	15¾	15¾
Neck girth[1]	**10**	**11**	**12**	**13**	**14**	**15**	**15**	**16**	**17**	**18**	**19**
Across back	9	9½	10	10½	11	11½	12	12½	13	13½	14
Sleeve length[2]	20	23	25	26	26¾	27½	28	28	28½	28½	29
Across chest[1]	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**16¾**	**17½**	**18¼**	**19**
Front shoulder[3]	8½	9¼	10	10½	11	11½	12	12½	13	13¼	14
Over shoulder[4]	11	12	13	13¾	14½	15	15¾	16½	17¼	18	18¾

[1] *Gross errors in bold print.*
[2] *Taken from centre back over elbow to cuff.*
[3] *From back neck to front of scye.*
[4] *From centre back (Armscye level) over shoulder to front scye.*

ill.5 -J.P. Thornton's Size Chart

Table of Average Measurements for Girls and Women (inches)
by J. P. Thornton 1900

Height	48	50	52	54	56	58	60	62	64	66	68	70	72
Bust girth	27	28	29	30	31	32	33	34	35	36	37	38	39
Waist girth	24	23	22	21	20½	20	21	22	23	24	25	26	27
Hip girth[1]	31	32¾	33¾	35	**36⅛**	**37¼**	**38½**	**40**	**41**	**42**	**43**	**44**	**45**
Nape to waist	12	12½	13	13½	14	14½	15	15½	16	16½	17	17½	18
Neck girth[2]	**11¾**	**12¼**	**12½**	**13**	**13¼**	**13½**	**13¾**	**14**	14¼	14¾	15¼	15¾	**16**
Arm length, C.B. to wrist	23¼	24¼	25¼	26	26½	27⅛	27¾	28¼	28¾	30	31	32	33
Armscye to waist	6	6¼	6½	6¾	7	7¼	7½	7¾	8	8¼	8½	8¾	9
Side seam to ground ...	31¼	32¼	33¼	35	36¼	37½	38¾	40	41¼	42¾	44	45¼	46¾
Leg length	23¼	24	25	26	27	28	29	30	31	32	32⅝	33⅜	34½
Thigh girth[1]	13¾	14¾	15⅜	16¾	**17¾**	**19**	**20½**	**21**	**21¼**	**21½**	**21¾**	**22**	**22¼**
Knee girth[3]	10	10½	11	11½	**12**	**12½**	**13**	**13½**	**14**	**14½**	15	**15½**	**16**
Calf girth[3]	10	10½	11	11½	**12**	**12½**	**13**	**13¼**	**13 6**	**14¼**	**14¾**	**15¼**	**15¾**
Ankle girth[3]	6¼	6½	6¾	7	**7¼**	**7½**	**7¾**	**8**	8⅛	8¼	8⅜	8½	8⅝

[1] *Erratic thigh girths in relation to hip in bold print.*
[2] *Errors in bold print, do not agree with formula.*
[3] *Errors in bold print, inconsistent with hip girths.*

divisions most female figures can be categorised. The relationship of the bust, waist and hip measurements to each other is the key to deciphering such a system.

Over the years of studying anthropometric research into body measurements, it has been deduced that there is a certain 'standard' growth around these areas on the body as it gets larger and the rate of expansion in one area (ie. bust girth) is relative to the growth in another area such as the hip girth. Therefore, it was noted by those concerned with this issue of sizing that, if the bust girth expands **X** amount, the hip girth should expand **Y** amount in relation. This still remains the principle notion behind creating successful size intervals but, there are some, not to say many, exceptions to the above rule.

Establishing a 'control' dimension to solidify this system was one area of confusion initially. This measurement would go on to become the base measurement ; when creating an interval, it would be this 'control' measurement that would ascend/descend in a regularised pattern. Whether or not to create the size intervals using the bust, waist or hip girth as the control measurement was the question.

The bust measurement nowdays is generally regarded as the appropriate control measurement, as unlike the hip girth, there is only 150 degree possibility of flesh volume increase around the bust (the rib-cage is fixed and only the breast volume variable),whereas there is a 360 degree possibility of an increase around the hips. Thus in a population of subjects of a similar size, the variation in the hips will be much more than the variation in the bust. Therefore, if you are trying to get the best fit to your garments, you are going to use the area of lowest prospective variance as the base, not the greatest. The organisation of these measurements into a graded system of sizes that can be used in the manufacturing of clothing is known as a size-

roll. Size-designation deals with the nomenclature attributed to these intervals and will be discussed later in this chapter.

Text books were in great demand at the turn of the century and a number of authors with extensive knowledge in pattern cutting were willing and eager to pass on their experience within these manuals. Such books were invaluable and dealt with both men's and women's clothing, using comparitives between male and female forms to highlight proportional differences. The issue of how to measure the body, especially the female form, early in this century was a subject that required tactful consideration and was dealt with within these manuals. The male tailors, who were the majority, found themselves in a predicament when measuring the female form thoroughly. The methodology involved in measuring, had to deliver comprehensive sizing results, yet not offend the lady in question by overstepping the mark of what was decent at the time.

Many tailors ignored what might be considered important body measurements for dress construction in favour of not overstepping that mark.W.D.F Vincent, an authority on such issues and the editor of the *"Tailor and Cutter"* had this advice to offer when measuring a lady,

> Avoid as far as possible nervousness and in every case arrogance.Take your measurements in a business like way and it will be found, no lady objects to any measurement being taken that is necessary for the proper production of the garment she is ordering (Kunick, 1984, p.1).

This was essential advice to the gentlemanly tailors of this time, as if a lady was to be adequately and correctly measured, it was better to be measured by the tailor himself . This was due to the fact that each person has a particular way of holding a measuring tape, be it tightly or on the loose side. Such seemingly insignificant details, whether a person holds the tape slackly or tightly can produce

noticably different measurements in what is required for a correct fit. With the arrival of the first made to order fashions through the catalogues, diagrams were provided to instruct the customer how to take their own measurements, (see ill.6) but with this Burberry order form it is also suggested that it is advisable to send a well fitting bodice to insure accuracy of fit.

The female silhouette has evolved greatly between 1900 and the present day, largely due to the undergarments worn to mould the body. The fashionable figure for a lady at the turn of the century was achieved with the rigid stays worn to create the "feminine" hour glass look. It was the measurements of the woman, whilst wearing these essential items of clothing, that were taken for tailoring purposes. Because of this, any attempt at creating a lasting sizing system was futile. Even within just twenty years the fashionable figure, whilst still corsetted became flat and adrogonous in appearance(ill.7).

The individual sizing chart based on the corsetted figure was an unrealistic starting point to create a universal sizing system that would stand the test of time. Hip, bust and waist girth were all radically altered by these undergarments. Not only did the waist circumference reduce and as a direct result the hip girth increase as the organs and excess flesh were forced downwards. W.D Vincent himself ommited the hip measurement in his size charts stating that due to the "dress improvers" worn at the time this measurements was deemed unnecessary (Kunick 1984, P.2)(ill.4).

The sizing charts which were established in the first forty years of the 20th century all varied vastly from each other and were not a solid enough base to build a usable, coherent system for the advancing manufacturing industry. Many were based on hypothetical women with measurements reliant on a mathematical equation, rather than "real measurements". Equations were used to calculate the measurements that

ill.6 -*Burberry* Measuring Chart

LADIES' MEASURE FORM

With which it is advisable to send a well fitting Bodice.

COAT OR BODICE

2 Collar Seam to Waist 5... .. .. continue to full coat length 6..... .....

Centre of Back to 1.....to Elbow 3..... to full sleeve 1..... .....

Round Collar, 8..... ....

Round Bust and Arms at 10..... ....

Round Bust, 11.....

Round Waist, 12.....

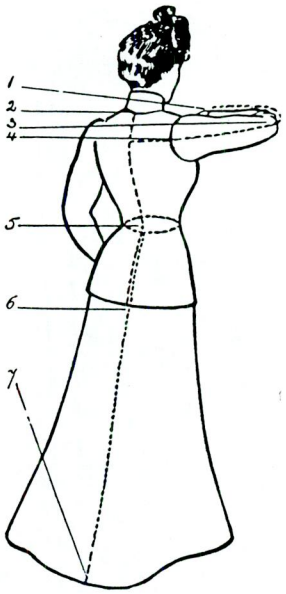
Round Hips, 13..... Collar Seam, 9 to Waist, 12..... continue full skirt length 14..... skirt length back 5 to 7..... ....

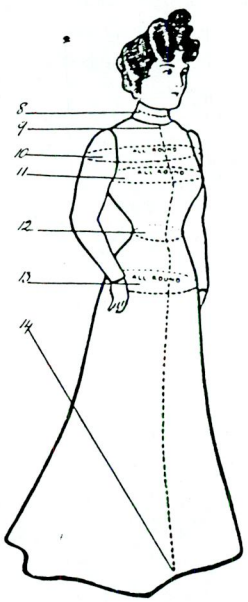
CAPES

Round Chest 11..... .....

Length behind from Collar 2..... ..

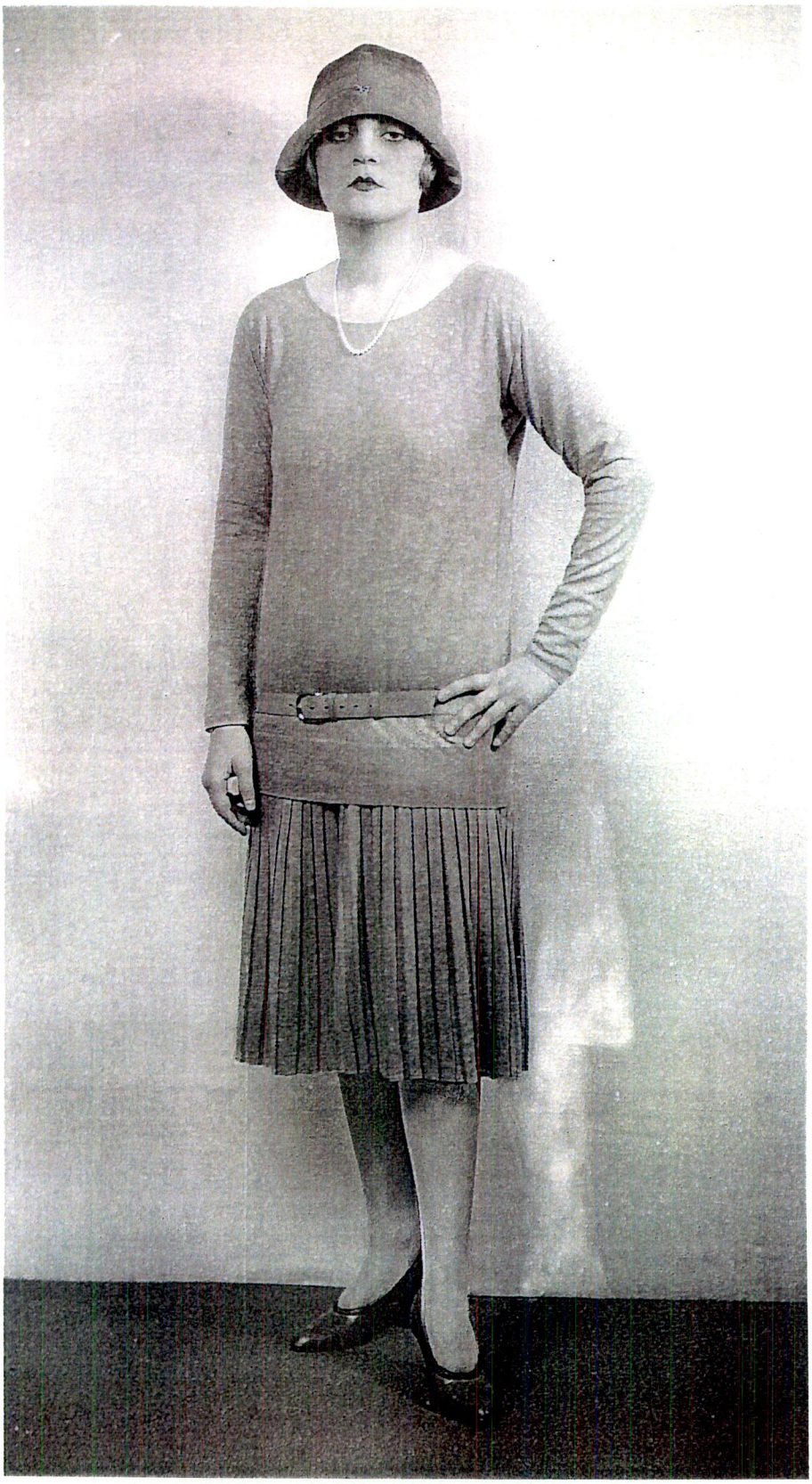
All Measures and Instructions are registered for future orders.





Order Form Overleaf.

ill.7 -Fashionable Figure (1925)



weren't decently obtainable from the body. Expert after expert published their own "conflicting" theories and formulas, dictating their own version of the method they used to size ladies clothing. When examined, these were seen as an individual's collection of measurements, nothing else.

It wasn't until the first, "scientific" study of women's body measurements, that an alternative to the continously revised, but still grossly inadequate, sizing charts of old was found. This took place in the U.S.A. in 1941 and was fully funded and supervised. The survey took into consideration, weight and fifty eight body measurements of the 14,698 women who volunteered to be measured. It was the Clothing Industry Development Council who adopted this method of accumulating and arranging data in the U.K but, it wasn't for another 12 years that a recognised standard was officially published in Britian.

The British Standerds Institution (B.S.I.) was founded in 1947, just prior to the Clothing Industry Development Council survey, to study the problems involved in womens and childrens sizing. In September 1950, a guide creating a range of size intervals was published by the B.S.I. but, this publication was by no means conclusive. It did, however, recognise the hip-girth as the key measurment in sizing and attributed four bust fittings for each hip size. This initial step was a direct response to the muddle and confusion that was evident in the clothing industry at the time. In 1951, on the publication of *Arnold Hard'sYearbook* (Kunick,1984,p.1) there was a total of 108 size charts, all with varying amounts and types of measurments, some dealing with body size and some with more specific garment sizing. Information used to compile these charts was collected from various sources and from contributers at home and abroad. With such varied data used for reference, yet no formalised

structure put on it, there were still big problems for the advancing manufacturing industry.

The first new survey carried out in Britain in 1951 by the Clothing Industry Development Council,was primarily based on the principal of the U.S. survey in 1941. There were some modifications to the American techniques of measuring. British volunteers were measured in their own foundation garments rather than specific measuring suits like their American counterparts.This was a serious, important survey that provoked a lot of interest by the clothing industry. Teams of measurers were specially trained for the purpose of such important field work that took 5 months to complete.

The results of this sizing survey were published by the Board of Trade in 1957. These results were adopted by the B.S.I. and were, after years of delaying a conclusion, moulded into the official guide BS3666 which was published in 1963 (see ill.8).The delay was caused by the difference of opinion between light and heavy clothing industry with regards to size designation and size intervals and the flexibility within both. It was agreed on and understood that the size tab on a garment is meant to imply, not that it is an exact size, but, that it is nearer that particular size than any other. Size coding therefore, is applicable to all aspects of womenswear regardless of styling. Both heavier outerwear and looser garments can be considered by the same sizing methods as close fitting, tighter clothing once they maintain a reasonable size resemblance to the coded number sewn into the garment.

B.S.3666 is still the recognised British Standard size designation and regulatory guide to womens' outer wear to the present day. It has however experienced some changes and modifications in the years between 1963 and today. Such as in 1970, the International Standards Organisation (I.S.O) attempted to

ill.8 -BS.3666 Guide (1963)

BS 3666: 1963

Size Coding Scheme for Women's Outerwear (inches)

Body Measurements	Size Symbol												
	8	10	12	14	16	18	20	22	24	26	28	30	32
Hips from	34	35	36	37½	39	41	43	45	47	49	51	53	55
but less than	35	36	37½	39	41	43	45	47	49	51	53	55	57
Bust from	32	33	34	35½	37	39	41	43	45	47	49	51	53
to	33	34	35½	37	39	41	43	45	47	49	51	53	55

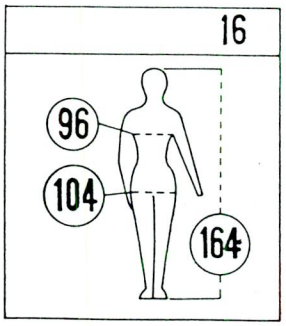
establish a universal sizing code that wasn't restricted to just one country. This quest proved impossible. The difference between each countries sizing system in relation to intervals and code designation used, was too great. Sometimes two size intervals in one country equalled one size interval in another. No middle ground could be decided upon as each country wanted to retain their own system as it was only recently established within the home clothing manufacturing industry. To change the system at that point would have only added to the confusion.

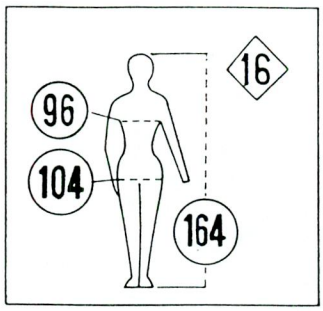
In 1974, the B.S.I attempted to bridge language barriers, by including the use of pictograms into the B.S.3666 (ill.9) and also converting the measurements to centimetres as a result of recommendations by the I.S.O.. The sizes established were given a "to and from" limitation (ill.10), where once measurements fell within this allowance, it met the criteria of a size 12 for example. It was also decided, that in regards to height, garments made for shorter or taller women would carry the suffix "S" or "T" respectively. Medium height clothing would require none.

It is this *size designation system* as opposed to the *size interval system* that also seems to greatly affect our judgment on what size we actually are. Nowadays there are international clothing producers all trading on the same market with radically different size coding for their clothing manufactured in various countries. Originally in Britain, an attempt at attaching a coding system to a range of sizes was made in the first half of the 20th century. These codes were made up of letters of the alphabet in what was meant to be an obviously decipherable system (ill.11). It can be seen from the chart, that there seems to have been an excess of coded sizes as the SM (Small matron) code, has identical measurements to the WM (Woman of Matronly Figure).

Nowadays the size designation system used by various countries, bear little

ill.9 -Pictogram example in theBS.3666





SIZE	16
BUST GIRTH	96
HIP GIRTH	104
HEIGHT	164

ill.10 -BS.3666 (1974)

Size Coding Scheme for Women's Outerwear (centimetres)

Body measurements	Size symbols												
	8	10	12	14	16	18	20	22	24	26	28	30	32
Hips from	83	87	91	95	100	105	110	115	120	125	130	135	140
to	87	91	95	99	104	109	114	119	124	129	134	139	144
Bust from	78	82	86	90	95	100	105	110	115	120	125	130	135
to	82	86	90	94	99	104	109	114	119	124	129	134	139

ill.11 -British Mantle Manufacturer's Size Chart (c.1920)

Date of origin about 1920

Fittings	Bust	Waist	Hip	In Sleeve
SS = Slim Small	34	29	40	17
SSX = ditto with larger hips ...	34	29	42	17
SM[1] = Small Matron[1] ...	**35**	**30**	**44**	**16½**
SW = Small Woman	36	30	42	17½
SWX = ditto with larger hips ...	36	30	44	17½
W = Woman standard size ...	38	32	44	17½
WM[1] = Woman of matronly figure	**35**	**30**	**44**	**16½**
WFB = Woman Full Bust	42	32	46	17½
WX = W size with larger hips ...	38	32	47	17½
SOS = Short Outsize	41	34	47	15½
OS = Outsize	41	35	47	17
XOS = Extra Outsize	44	36	50	17½
OSM = Outsize matronly figure	45	36	52	17
XXOS = ...	47	38	53	17½
XOSM = ...	50	39	56	17
XXXOS = ...	50	40	60	17

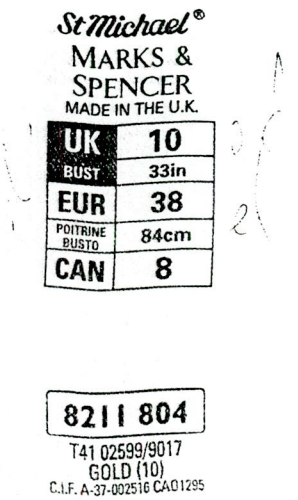
[1] *Duplication of sizes shown in bold print.*

resemblance to one another, whether by nomenclature used or varying size intervals. Size designation no longer relies on codified combinations of letters and numerals. Unlike the british system of old, the code "Size 12" in the UK has no significance to any particular measurement on the body or type of figure that it refers to (eg. WFB, would have fit a **W**oman with a **F**ull **B**ust). In saying this, it is widely understood that the French clothing industry designate their sizes by quoting half the bust measurement in centimetres (eg. Size 42, carries a bust measurement of 84cm's).

Nowadays garments originating in different countries can be found hanging side by side on rails all under the one roof and displaying different forms of size designation. On encountering such a selection of size numbers and types of size codes, a potential customer would have to take numerous sizes into the fitting room to see which size is correct. There is rarely a case where a shop provides a conversion chart relating size designations of similar dimensions from each country. Some international designers/manufacturers lable their garments by a selection of coding systems (see ill.12). The confusion is doubled when choosing a British or American size designated garment, as they use similar nomenclature. It is so easy to mistakenly pick up an American designated size 12 garment only to realise that it is equivalent in size to a British designated size 14.

Taking for example, a hypothetical woman of medium build shopping in the worldwide market place. The chart (see ill.13) shows the wide range of sizing codes applicable to her. You would have to have a very good memory to remember this list of sizes for a shopping trip. What is generally assumed, is that the lower the code number, the smaller the garment. This is true in most cases including the 1,2,3 size designation system. There are no regulations governing what dimensions these numbers refer to on the body or garment. It is also the same with the Small-Medium-

ill.12 -Multi-Coded Garment Label



ill.13 -International Size Designation Chart

Country	Size
Australia	14
Bulgaria	81
Canada	32
Czechoslovakia	3AA45
Denmark	40
Finland	NC 40 or C 38
France	42 n
Germany	40
Holland	34
Hungary	164/80/94 or N 90
Iran	38
Ireland	12
Israel	40
Japan	92/99
New Zealand	14
Poland	164/92/96
Spain	46+2 / L
Sweden	C40
Switzerland	40
UK	14, 38, or 8
USA	12 or 14
USSR	164/92/96
Yugoslavia	40

Large codes. Some manufacturers relate "Small" with dimensions associated with an 8-10 size, whereas a size "Small" by another manufacturer could be the same as a size 10-12. This multiplicity of size designations not only causes the shopper much confusion, but also causes unnecessary trade barriers on the lucrative worldwide rag trade.

CHAPTER TWO- Experiment : What Constitutes a Size 12 Garment?

There are various numerical guides to a sizing system that tries to categorise figure shapes and sizes, in order to provide a solution to the complex problem of how to clothe the masses. Whether this categorisation is successful in its aim, is debatable, as will be discussed in this chapter.

There are no universal size guidelines carved in stone, just groups of designated sizes consisting of hip and bust measurements and tolerances within these size intervals. Each country's size roll is based on independent surveys by governments and other official bodies within these countries. The resulting data from these surveys can be varied and can bear little relation to each other, as different methods of measuring are used and different numbers of measurements are taken in each country.

Anthropometric surveys such as these are vital for gathering information in order to try to regularise an appropriate sizing guide that is useful for the manufacturers and customers alike. However, the disjointed nature of such surveys, with no regulation governing what happens from country to country, makes every effort to create a universal sizing guide useless. Too many surveys and guides publishing independent results, create a jumble and excess of sizing codes and measurements that only add to the confusion of eg.' what is a size 12?'

To observe the extent to which this is true in the Irish market place, I carried out my own sizing experiment. As an Irish woman with a keen interest in clothing (buying, wearing and designing) I am only too aware that there is much confusion over what measurements constitute what size. Ironically most women are only too aware that if a garment says size 12 on a label, it doesn't necessarily mean that it will have the same measurements as another garment with the same size-code. Because it

is ready-to-wear clothing we are more forgiving when a garment doesn't seem to be the size it claims to be. Whether this is the result of an "broken" sizing system lacking in information and uniformity or due to manufacturers giving little consideration for their customer's sanity adopting various approaches to sizing, is the question that needs an answer. For this task, I enlisted the help of a fellow student, Michelle, as my fit-model for the experiment. Her body measurements adhere to those set out in the B.S.3666 document dictating what can be called a size 12 (ills.14&15).

The B.S.3666 sizing guidelines are still the only official guide to women's clothing sizes in Britain since first published in the sixties and have been altered very little since. It's relevance in today's manufacturing industry is debatable, but it will be used for the purpose of this experiment since it is still the only guide in use at the moment. Other essential measurements used for this experiment are waist and height dimensions that are not actually set out in the B.S.3666 document. The average height of a size 12 female lies between 160-170cm (5ft.4-5ft.8) and as mentioned in the first chapter, any shorter or taller garments are required to carry a 'S' or 'T' suffix. Waist girth can range between 65-71cm (26-28.3 inches) and, as can be seen from ills.14&15, the fit-model's statistics are accommodated within this range. Other body measurements are relative to a size 12, as Michelle doesn't have measurements that are any way out of the ordinary. For example, she doesn't have extremely bulky thighs or very wide shoulders.

It would seem that the tolerances within what is called a size 12, are quite generous with 4cm allowed between the upper and lower limit hip and bust measurements. Those tolerances are further extended by certain fabrics that have stretch components or are of a looser weave. It does seem, therefore, that there should be enough scope within a size 12 standard measurement, for companies to

ill.14 -BS.3666 (1982) Measurements

Size codes	Body measurements			
	Hips		Bust	
	from	to	from	to
	cm	cm	cm	cm
8	83	87	78	82
10	87	91	82	86
12	91	95	86	90
14	95	99	90	94
16	100	104	95	99
18	105	109	100	104
20	110	114	105	109
22	115	119	110	114
24	120	124	115	119
26	125	129	120	124
28	130	134	125	129
30	135	139	130	134
32	140	144	135	139

ill.15 -Fit-Model's Measurements

BUST	88.5 cms.
WAIST	69 cms.
HIPS	93.6 cms.
HEIGHT	164.5 cms.

manufacture within. Confusingly for women everywhere, this doesn't seem to be the case.

The factors that have affected successful garment sizing and caused such huge discrepancies within a size 12 are obvious from this experiment. These include issues such as the country of origin of the garment, the customer the clothes are being produced for and the market level they are being retailed in.

A cross section of the market place has been included in this research. This included mass-market/high street, middle-market and designer level clothing, all tried on and discussed in terms of size and fit. A semi-fitted/fitted shirt and close fitting tailored trousers by each designer/manufacturer were tried on by the fit-model in every case. Generous fitting size 12 garments are usually associated with the middle-market sector of the clothing trade. This is due to a higher retail price on a garment allowing for less scrimping on yardage creating a roomier garment in terms of size. This would be considered a luxury on low-cost mass-produced goods, where economic lay-planning and minimum seam allowances are the norm. In such a case a slight hand movement can cause a machine operative to grade an already 'stingy' sized garment down another size, when manufacturing under such conditions.

The reputation and name that a company carries, dictates the level of quality control exercised in regulating proper sizing of a garment. It is generally presumed that if the company is renowned for high-quality garments, there will rarely be a case that wrongly sized garments will pass through quality control and onto the market place. N.C.A.D. fashion tutor Linda Byrne, who also designs for a ladieswear company, informed me that regular spot checks are carried out through the production to make sure that the end garment measures-up to the approved sample. If the garments checked are not up to standard, the next 100 garments off the line have to be

measured thoroughly by hand, which can prove to be an inconvenient and time consuming penalty. However, even within a company trading in the middle-market sector, there are occasions when it is a matter of economics to "shift" the goods, regardless of adequate attention given to correct sizing procedures. This I've witnessed from personal experience.

I worked in one un-named company for a short time when, on one occasion, too few size 12 skirts were produced for an order, while there was an excess of size 10's in the same style. Some of these size 10 skirts had their labels and tags changed to size 12's. This meant that within one order of the same style, a retailer, unknowst to himself could have drastically different 'size 12', skirts on his rails at the one time. No wonder that the public get confused about what dress-size they are when blatantly wrong-sized garments such as these are on the market place. My time of work experience was over just as these skirts were being dispatched, but I have since been informed that about half the stock sent out was returned. Maybe we are getting more aware of what is acceptable in terms of correctly sized garments.

After reviewing the results of the experiment, no definite pattern emerged substantiating the view that mid-market garments are more generously sized than those produced for the lower sector. It may be noted that an inexpensive pair of trousers in *Japan* (a shop aimed at the youth market), that retail under £20 didn't have the same depth of hem as a Marks and Spencer's £45 pair. This limits the taller size 12 woman shopping in Japan, while in Marks and Spencers as well as offering a deeper hem (but not extra bulk), they offer a few trouser styles in different leg lengths. (12 S and 12 L). After fitting a pair of Prada trousers in Brown Thomas at the cost of £325, I noticed that the hem was overlocked and left raw. They were a good 3 inches too long for the fit-model, but as the assistant explained, there is an in-store

service to have the leg-length fitted to the particular customer. This seemed to give the garment an added attraction of being semi-made-to-measure, with the attention of being fitted in the store for the correct trouser length seen as being an added luxury.

There is also another train of thought that as you approach designer level clothing, the sizing system used becomes less generous. This is thought to be an elitist idea that only the rich and the very slim should be able to wear such luxury, top of the range items. If the clothing is designed to be worn fabulously on the catwalk by long-limbed, supermodels, it would seem to be a poor advertisement for the top designer, if the average Jane Doe was also to feel comfortable wearing such items of designer clothing. The air of intimidation felt by most of the general public on entering a designer boutique, is reinforced by the indignity of trying on a size 12 (your normal size) only to realise that you should have asked for a size 16 to fit properly.

To test this theory, garments from designers such as Jil Sander, Alexander McQueen, Prada were all tried and tested to see if this elitist sizing system really was in use at a designer level. No conclusive evidence to this fact was found however. All garments fitted the model – some more snugly than others, but no designer garment seemed so unnaturally tiny that it would be purposely used to separate the Jane Doe's amongst us from the Ivana Trumps. On the basis of this experiment, it doesn't seem to be the case that this elitist sizing system is in operation in the Irish market-place.

More accommodating sizing is also associated with different countries marketing their clothing at a particular nationality. Many authors refer to different nationalities as having certain characteristics affecting figure shape. British women are stereotypically pear-shaped, French women delicate and fine boned and German women are considered more solid and taller. Some of these presumptions are grounded in fact, on referral to the individual countries size charts (ills.16,17&18).

ill.16 -Size Chart (England) - MEDIUM HEIGHT GROUP — AVERAGE BUST

Ref:	Measurement	Size symbol 34	36	38	40	42	44
1	Bust girth	81.3	86.3	91.3	96.3	101.3	106.3
2	Waist girth	58.4	63.4	68.4	73.4	78.4	83.4
3	Hip girth	86.3	91.3	96.3	101.3	106.3	111.3
12	Neck base girth	35.6	36.8	38.1	39.4	40.6	41.9
13	Upper arm (muscle)	35.6	36.5	37.5	38.4	39.4	40.3
24	Height	161.3	161.9	162.6	163.2	163.9	164.5
25	Cervical height	139.1	139.4	139.7	140.0	140.3	140.7
29	Knee height	43.5	43.5	43.8	43.8	44.1	44.1
31	Outside leg	102.9	103.5	104.2	104.8	105.4	106.1
35	Back waist length	38.7	39.1	39.4	39.7	40.0	40.3
36	Across back	31.8	33.0	34.3	35.6	36.8	38.1
39	Shoulder length	11.4	11.4	11.8	11.8	12.1	12.1
49	Cervical to centre front waist	48.9	49.5	50.2	50.8	51.5	52.1
—	Weight: kg	47.3	53.6	60.0	66.4	72.7	79.1
Nearest British Standard Size		8	12	14	16	18	20

ill.17 -Size Chart (West Germany) - REGULAR HEIGHT GROUP — AVERAGE BUST

Ref:	Measurement	Size symbol 36	38	40	42	44	46
1	Bust girth	84.0	88.0	92.0	96.0	100.0	104.0
2	Waist girth	63.5	68.0	72.5	77.0	81.5	86.0
3	Hip girth	90.0	94.0	98.0	102.0	106.0	110.0
12	Neck base girth	33.9	34.6	35.3	36.0	36.7	37.4
13	Upper arm (muscle)	26.0	27.3	28.6	29.9	31.2	32.5
24	Height	164.0	164.0	164.0	164.0	164.0	164.0
25	Cervical height	141.0	141.4	141.8	142.2	142.6	143.0
29	Knee height	46.0	46.0	46.0	46.0	46.0	46.0
31	Outside leg	103.5	103.8	104.1	104.4	104.7	105.0
35	Back waist length	40.0	40.0	40.0	40.0	40.0	40.0
36	Across back	34.0	35.0	36.0	37.0	38.0	39.0
39	Shoulder length	12.0	12.1	12.2	12.3	12.4	12.5
49	Cervical to centre front waist	49.9	50.6	51.3	52.0	52.7	53.4
—	Weight: kg	49.8	54.0	58.2	62.4	66.6	70.8

ill.18 -Size Chart (France — MEDIUM HEIGHT GROUP — AVERAGE BUST

Ref:	Measurement	Proposed European size symbol 80 / 84 / 160	84 / 88 / 160	88 / 92 / 160	92 / 96 / 160	96 / 100 / 160	100 / 104 / 160	104 / 108 / 160
1	Bust girth	80.0	84.0	88.0	92.0	96.0	100.0	104.0
2	Waist girth	58.6	61.8	65.2	68.8	72.6	76.0	80.7
3	Hip girth	84.0	88.0	92.0	96.0	100.0	104.0	108.0
12	Neck base girth	29.8	31.2	32.3	33.3	34.1	34.8	35.4
13	Upper arm (muscle)	23.5	25.8	27.6	29.2	30.5	31.7	32.7
24	Height	160.0	160.0	160.0	160.0	160.0	160.0	160.0
25	Cervical height	137.6	137.6	137.6	137.6	137.6	137.6	137.6
29	Knee height	42.5	42.5	42.5	42.5	42.5	42.5	42.5
31	Outside leg	100.4	100.4	100.4	100.4	100.4	100.4	100.4
35	Back waist length	39.7	39.7	39.7	39.7	39.7	39.7	39.7
36	Across back	32.4	33.9	35.2	36.2	37.1	37.9	38.6
39	Shoulder length	13.8	13.8	13.8	13.8	13.8	13.8	13.8
49	Cervical to centre front waist	47.8	49.2	50.4	51.3	52.1	52.9	53.5
—	Weight: kg	37.9	45.4	51.6	56.7	61.1	65.0	68.5

These results were accumulated by surveys in each individual country. The medium height group in Germany is 4cm taller at 164cm, than the British equivalent height group, which measures up at a mere 160cm(ill.19).

After reviewing the results of the experiment, it is not conclusive whether or not the designers or manufacturers of different nationalities consider the body shape and size differences of the population of their own country. Both German designed size 12 garments tried on, from Steilman and Jil Sander, were adequately sized around the hips and waist. This factor did not seem any radically different from garments by a British manufacturer (eg. Jaegar). From the charts (ills.16,17&18) it can be noticed that the German size 12(38) woman has a much larger bust, waist and hip measurement than her British counterpart- the waist girth differing by over 4cm. This method of sizing, creating extra ease around such areas, didn't seem to be exclusive to the German manufacturers however.

The fact that Jil Sander as well as Dolce & Gabanna, Bennetton, DKNY and other such designers sell their clothing worldwide, makes it likely that they use differently sized patterns for the same garment. This is to cater for the figure type of the average customer in the country the garment will be retailed in. On interviewing Mr. Willie Donnelly, a freelance tailor working for Irish based and international companies, I was informed that garment sizing can greatly change according to the nationality of the customer and the country the clothes are retailed in. For the American market, in some cases, the garment is graded up a size, but the size code stays the same. Therefore, an American size 10 (British12) could in actual fact have the measurements of a British size 14. Garments for the French market are sometimes graded down half a size, while the size 12 name (42 in France), remains the same.

ill.19 -Height Group Distribution

Country	*Height (%)*						
	Short		*Medium*		*Tall*		*Total*
	(cm)	*(%)*	*(cm)*	*(%)*	*(cm)*	*(%)*	
USA	155	46	165	45	175	9	100%
England	150	24	160	55	170	19	98%
West Germany	156	31	164	47	172	22	100%
France	152	28	160	51	168	16	95%

The Japanese market is another issue altogether, as sizes have to be radically altered to suit their unique shape and size. In the West, it does seem to be the case that the confusion factor lies with the act of naming a garment. A size 12 garment in Britain, with correct measurements, could in effect be equivalent to a 'size 14' in America and a size 11 and a half in France.

The most obvious factor that seems to contribute to the sizing irregularities between garments fitted on throughout all the market levels, is who the garment is being produced for and targeted at. Knowing their customer profile is essential to every retail/manufacturing business. To establish exactly what type of person would wear what type of clothing, extensive research and surveying is carried out. A "bullseye" customer is created. This is the "ideal" woman – shape, size, age, income and lifestyle that would buy the clothing in question and fit every factor above.

It is rare that this woman features in reality, but, it is at this notion of a "bullseye" customer, that manufacturers aim their product. This "ideal" woman has a mean average of all the characteristics of the potential customer superimposed on her. She is, in turn, to act as a target (bullseye) which the designers and manufacturers aim to hit.

Some customer profiles are very specific regarding age and work within a tight age bracket. For example, Top Shop would direct their range of clothing at teenage girls to women in their mid-twenties specifically. This provides the company with an age bracket of only 10-15 years to consider. In saying this, it does not necessarily mean that if you are over thirty years of age, you are automatically excluded from wearing Top Shop clothes. It does mean, however, that on trying on these clothes, a woman of 30 plus will notice that the designs, styles and size of the

ill.20 -Changes in the Principal Measurements with Age

Centimetres	18–29 years	30–44 years	45–64 years
	(1)	(2)	(3)
Bust girth	89·4	93·0	98·5
Waist girth	64·0	69·0	76·5
Hip girth	95·3	97·5	102·6
High hip girth	84·8	89·0	95·3
Upper arm girth	27·2	29·0	30·5
Stature	161·0	160·0	157·7
Neck to bust	25·4	27·0	29·7
Hip height	81·0	80·3	79·2
Body rise	29·0	29·7	31·0

garments have overlooked some of the body characteristics normally associated with a more mature figure. No accommodation will have been made for an increased waist girth or lower bust point (ill.20) as it will have been presumed (wrongly in many cases) that the potential customer has a more youthful, slimmer figure.

This orientation towards a core target market is the main reason for the adoption of various sizing policies from one retailer to another. *Top Shop* is one of a number of women's wear retail outlets belonging to The Burton Group Ltd.. The trading group also owns *Dorothy Perkins*, *Principles* and *Evans*. It would seem that a cross section of the customer-type is being catered for within these stores – from the young trendy to the classic women's wear to the outsize customer. However, by categorising specific sizing systems to each type of store, means that the customer, who is outside the customer profile range of a store, will find that her fitting requirements have been ignored. The woman in her thirties who wants to wear a trendy Top Shop shirt and trousers as opposed to a nicely tailored Dorothy Perkins suit aimed at her age group, will find that although she is a size 12 by Dorothy Perkins/Principle standards, she is a size 14-16 in Top Shop clothes. Not every woman of a certain age feels that she has to wear what is classified as appropriate for her age group and this stigmatisation in relation to sizing affects otherwise potential sales.

This is noticeable after the experiment, that although the model used is in her early 20's, the Top Shop size 12 shirt was cut tighter across the back and upper arms than a similar style fitted in Dorothy Perkins. This shirt, also a size 12, fitted with altogether more ease all round. It seems to be the case that while Top Shop caters for the figure shape of Kate Moss and her peers, Dorothy Perkins is more concerned in dressing her mother and aunts. From my shopping experience with my mother, I

know that this categorisation in theory may seem to work, but there have been many occasions that both my mother and myself have taken a fancy to the same item of clothing. Although this garment may be marketed at my age group (i.e.under 25) it would look just as good on my mother – if , the size of the garment considered her measurements as a woman over 45 years of age.

A clothing store like Marks & Spencers tries to provide a solution to this problem of stigmatisation by offering a wide range of styles for every age group dealing with individual sizing systems according to different ranges. The ladieswear bullseye customer in this store is anywhere from a teenager to a senior citizen and Marks & Spencers seems to have built their reputation on the fact that they can accommodate this cross-section of customers under one roof. Marks & Spencers are a store that uses their own survey to attain body measurements of their potential customer. This information is the basis of their size charts. These surveys take place every 10-15 years and include over 6,000 participants to be measured (Turner, 1998. P. 44).

CHAPTER THREE – Style, Shape & Fit- Factors to be Considered to Ensure a successful Sizing System for the Future.

This standardisation of female figure types into specific size intervals and codes, has greatly influenced how women are perceived (and view themselves) within today's social environment. The body as an entity in itself can provoke many reactions within society today in relation to what is seen to be acceptable physically and of course – is not. The Cult of Skinniness that emerged in the 1960's, was further reinforced by the arrival of the nominal sizing system forcing women to categorise themselves into particular clothing sizes. The whole notion of going into a shop and asking the sales assistant for a garment over a size 12 has been portrayed as demeaning to oneself. To avoid the situation of being told, "Sorry! We don't stock it in your size", many women diet and exercise to conform to an acceptable clothing size.

What is this acceptable size? Is the cut off point a size 16, the largest size most high street stores stock? Many women nowadays diet not, to lose a stone or two, but, they cite their goal as being or becoming a size 10. When a sizing system was first established it directly affected the middle to lower class women who were being offered ready-to-wear clothing as an alternative to home made and hand-me-down clothes. Standardisation of sizes, brought about a fear of not being able to fit into these acceptable size brackets and in turn, the exclusion from the fashionably attired sector of society (even if it still was just ready-to-wear). Size 12 seems to be the much touted, average size of the woman in the latter half of the twentieth century. Why then are 48% of the world's female population a size 16 or over? If size 12 is classified as "average", size 10 is the elusive, aspirational size of clothing that is jealously associated with models and those existing on a permanent diet of lettuce leaves.

All sorts of connotations are brought about when a woman doesn't conform to this image of slimness. Overweight people, especially women, are heavily criticised by the media when they don't conform to the image of femininity that their sex (and the opposite sex) deems to be appropriate. Their validity as an attractive feminine person is placed in question. Constant attention to the lowering of one's dress size is evident in women's magazines today. Many celebrity dieticians and fitness experts advise you now to, "Throw out the scales", and let your clothes be the guide to the success of your diet (ill.21). Guilt and being overindulgent to oneself and therefore too large a size, is motivation enough behind the world wide dieting phenomenon.

Images of glamorous size 14+ models are rarely visible on magazine pages or on shop promotional posters. The manufacturer offers the potential customer a glossy image of a size 10 to 12 woman wearing their clothes. The customer who is also a size 10-12 can relate to these images but, if you are a size 14+ there are no such insights to what the clothes would look like on a similar shaped body. As most manufacturing samples are made in a size 12, they are generally given the go-ahead to be put into production after a fitting on a size 12 fit model. Sizes 14,16,18 plus garments are graded accordingly to the correct intervals, but, very little thought is given to the fact that this style may not be in the least bit flattering to the larger figure. Most women want to be fashionable so many will buy these items of clothing regardless. Some may be just content to resign themselves to the fact they fit the clothes, even though it is not in the way the promotional photographs show.

Retailers and manufacturers alike recognise the effect that being a particular nominal dress size has on the potential customer and some use selective sizing to their advantage; some manufacturers specifically size clothes more accommodatingly, to lure the potential customer into a false notion that they are a smaller size. This form of

ill.21 -Diet/Fitness Advertisements

indirect flattery could sway the customer towards purchasing an item of clothing, due in great part to the fact that it is a size 12 to the 14 they usually take. Alison Knox, womenswear product designer at Next, disputes this claim, stating that, "Most people say our sizes are generous – a 12 can often get away with a 10. Not that we are trying to lull the customer into a false sense of security about her size, it's just that we don't like to see our clothes skimped and tight" (Haggard, 1989, p.5).

The mail-order company *Nightingales*, state on their catalogue that their sizes are 'generous' (ill.22). Although the measurements stated are at the upper limits set for size intervals in the BS3666, on the basis of the measurements given they do not seem to be overtly generous. Most of the clothing in the catalogue would mainly be aimed at women of 40 years and over. The range consists of separates and some dresses. None of the blouses fit close to the body and all the skirts, trousers and dresses are either gathered into elasticised waistband or have elastic inserts (ill.23). This allows for ease of fit at the waist and the gathered/pleated style of most of the skirts mean that there is added roominess around the hips. These factors presumably add even further to the overall generosity of their sizes.

As a mail-order catalogue, Nightingales have to be very clear on any sizing differences that occur between them and similar catalogues or retail outlets. *Next Directory* provides a sizing guide to taking measurements (ill.24). The fact that there are no fitting facilities when ordering by catalogue means that sometimes the wrong size is ordered and returns can be frequent.

In a society where so much emphasis is placed on being slim and therefore desirable and attractive, it is interesting to note that over the past half a century, we have become progressively bigger overall. If we take, for example, a comparison of the Anthropometric surveys that took place in Germany in 1973 and 1983 (ill.25);

ill.22 -*Nightingale's* size Guidelines

the address is: Nightingales House, Long Lane, Craven Arms, Shropshire SY7 8DU

OUR GUARANTEE

If anything you buy does not come up to your expectations, return it to us within 10 days of receipt in perfect condition. We'll refund your money within 2 weeks of receiving back the goods. Our guarantee is in addition to your statutory rights. We will always do our best to send your order as quickly as possible but sometimes a delivery may take up to 28 days.

GUIDE TO SIZES

OUR SIZES ARE GENEROUS!

Please don't ignore this information

TO FIT	BUST	WAIST	HIPS
10	34	26	36
12	36	28	38
14	38	30	40
16	40	32	42
18	42	34	44

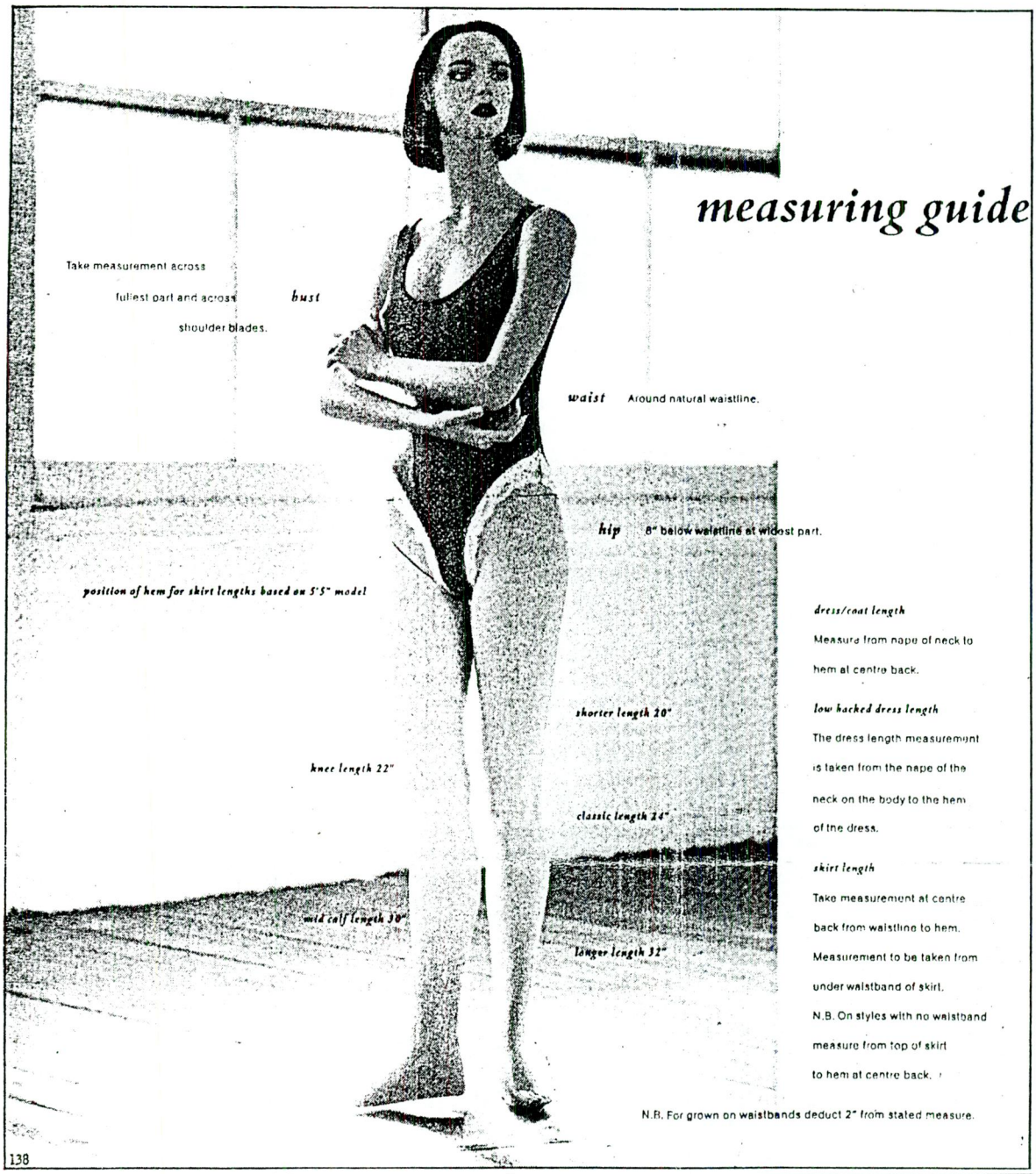
ill.23 -*Nightingale* Catalogue Outfits

A62 Black watch brushed cotton skirt with shirred elastic waisband.

A34 Teal green blouse in a beautiful soft, warm handle Dovedale twill.
55% viscose 45% polyester twill
Sizes 10, 12, 14, 16, 18 **£23**

A33 Skirt to match A31, A32. The skirt is gently pleated onto the waistband which has little elasticated insets for an easy fit.
100% viscose twill

ill.24 -*Next Directory* Measuring Guide



ill.25 -German Sizing Survey Comparisons

Base size 38			*Regular bust fitting*			
	Short size 19		Regular size 38		Tall-size 76	
Measurement	1973	1983	1973	1983	1973	1983
Height	156.0	160.0	164.0	168.0	172.0	176.0
Bust girth	88.0	88.0	88.0	88.0	88.0	88.0
Waist girth	69.0	71.0	68.0	70.0	67.0	69.0
Hip girth	94.0	94.5	94.0	94.5	94.0	94.5
Back waist length	38.0	39.2	40.0	41.2	42.0	43.2
Front shoulder to waist	41.6	41.9	43.0	43.3	44.4	44.7
Across back	35.0	35.5	35.0	35.5	35.0	35.5
Cervical height	134.9	139.3	141.4	145.8	147.9	152.3
Cervical to knee	90.9	95.9	95.4	100.4	99.9	104.9
Waist to hip (side)	19.4	20.6	20.2	21.4	21.0	22.2
Shoulder length	12.1	12.5	12.1	12.5	12.1	12.5
Acromion point to elbow	33.6	34.7	34.6	35.7	35.6	36.7
Acromion point to wrist	56.7	57.8	59.1	60.2	61.5	62.6
Upper arm (muscle)	27.3	28.2	27.3	28.2	27.3	28.2
Wrist girth	15.9	15.9	15.9	15.9	15.9	15.9
Neck base girth	34.6	36.6	34.6	36.6	34.6	36.6
Front neck point to bust point	23.7	27.0	23.7	27.0	23.7	27.0
Cervical to centre waist	49.2	49.2	50.6	50.6	52.0	52.0
Waist height from soles	98.8	101.0	103.8	106.0	108.8	111.0
Inside leg	72.4	74.0	76.8	78.4	81.2	82.8
Weight: kg	52.2	55.0	54.0	57.0	55.8	59.0

even within just 10 years, there is a noticeable increase in quite a few of the bodily measurements taken from a standard size 12 figure (German size 38). Height has increased by 4cm while waist girth by less, at 0.5cm. Average weight had also risen by 3kg (7.5lbs). According to one newspaper article "five years ago, the average bust size was a 34B but, today it is more common to be at least two sizes bigger"(Cremin, 1998, p.25). Whether this is due to better dietary habits or an overall more sedentary lifestyle it is not certain. What is certain is that both the male and female population of the latter half of the twentieth century is noticeably taller and wider than their ancestors.

Has this factor been taken into consideration by today's clothing manufacturing industry? If we are getting taller, then the vertical measurements such as nape to waist, taken in the 1950's during initial surveys are obsolete today. It hasn't been the case that the horizontal measurements, such as hip, bust and waist circumference, have proportionately increased at the same rate as the height. Therefore, these original measurements even if made bigger, aren't applicable today. If such important physical developments as the above are not taken into consideration, when sizing clothing for the woman of the nineties, it is understandable why certain sized clothes don't fit the way they should.

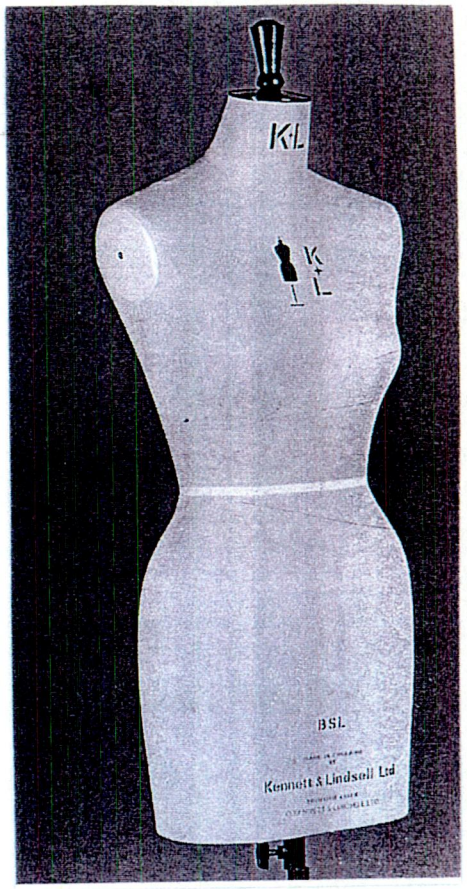
An integral part of clothing manufacturing for over 100 years now, is the use of dress-stands when designing and producing garments. Modelling and draping on the stand is a very important part in designing clothing and unless there is a solid base for such construction, it is a futile exercise. Using the dress-stand manufacturing company Kennett and Lindsell Ltd. as an example, it can be illustrated that there are a great variety of body types, even within a size 12.

Kennett and Lindsell Ltd. have been in business since 1877 and sell to every country in the world (60% is exported outside the E.U.). Each country has specific size guidelines that K&L produce the stands to meet. Most stands are produced between size 8 and size 22. In reference to the e-mail I received from Mr. Len Boxall, the Sales Manager, I learned that there are over 60 different size 12's made to cope with the type of garment produced and the figure type to which it is appropriate. For example, there are very high bust stands for the production of bridal wear to emulate the structured underwear worn under wedding-gowns. There are also lower bust dress-stands for lingerie construction to accommodate the unsupported breast shape. The catalogue provides pictures of the stands and the bust, waist, hip and nape to waist measurements also.

The shape and measurements of the size 12 stands can vary greatly from one to another (ills.26&27). Model BSL in a size 12 is 1.5cms. larger around the waist and 2cms smaller around the hips than the LCFA size 12 model. These stands do not include tolerances for coat construction for example, that can alter the measurements even more drastically. The number of measurements used to construct these stands are in excess of 100 and are as a direct result of surveys that the Company carries out. They do not rely on the BS3666 guidelines. Mr. Boxall referred to these as being defunct, because they no longer consider these guidelines adequate for the production of their dress-stands and rely on their own more up-to-date Anthropometric information.

It is interesting to map body shape differences onto inanimate objects such as dress stands where it can be seen that although the measurements may be similar, shape is not always constant. Measurements taken by tape measure are only a small indication to what sized clothes fit what figure. Body shape can greatly differ between

ill.26 -*Kennett & Lindsell* – BSL dress-stand

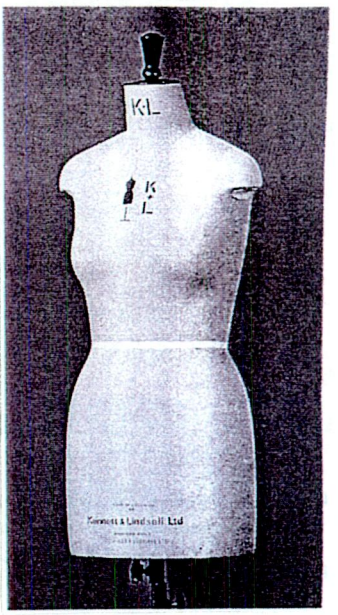


MODEL BSL

METRIC MEASUREMENTS (BSL & BSN)

Size	Bust	Waist	Hips	Nape to waist
10	83	59	87	40
12	88	64	92	40.5
14	93	69	97	41
16	99	75	103	41.5
18	105	81	109	42
20	111	87	115	42.5
22	117	93	121	42.5

ill.27 -*Kennett & Lindsell* – LCFA dress-stand



MODEL LCFA

	Bust	Waist	Hip	Nape to waist
METRIC	86.5	66	91.5	40

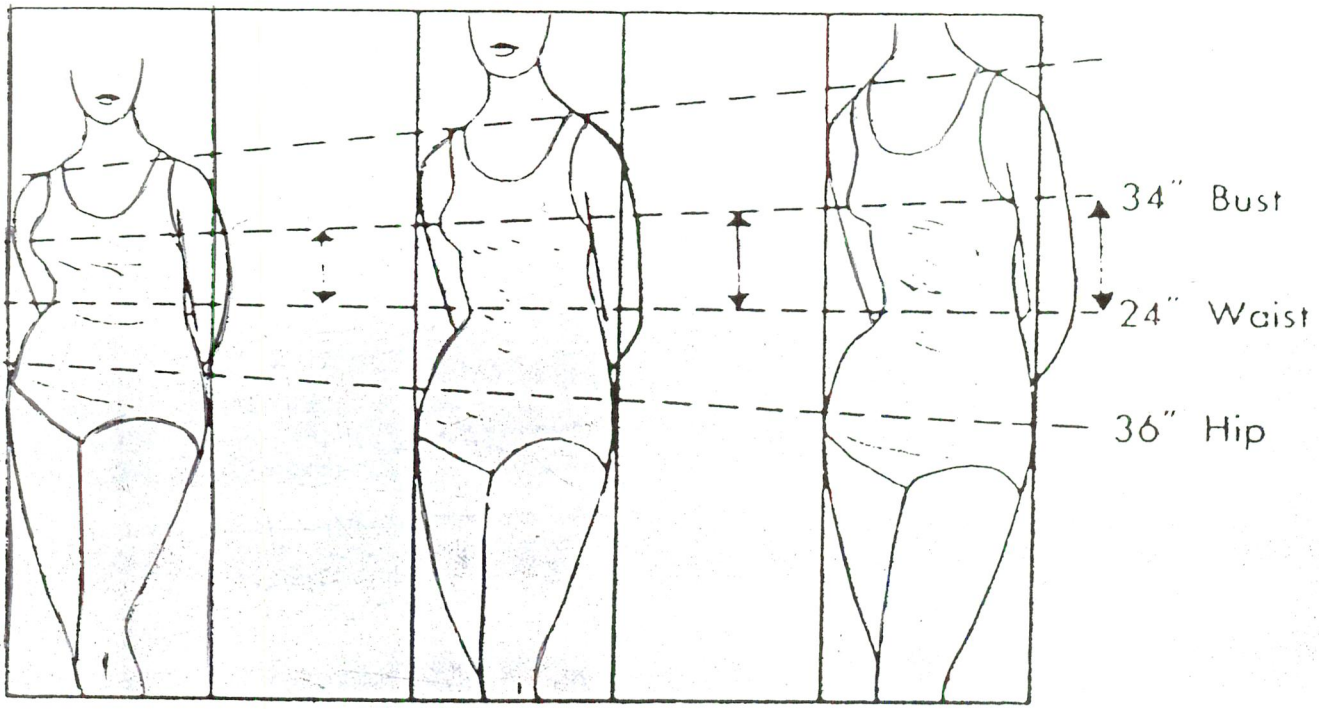
two people with the same bodily measurements. The most obvious case of women who have similar measurements being different clothing sizes, is evident when height is taken into consideration. In ill.28 the three figures are of the same bust, waist and hip measurements but, appear to have very different measurements if length dimensions vary.

A woman of 5ft., whilst having the same bust and hip measurements as a woman of 5ft 10ins. will require clothing that has shorter vertical measurements (such as nape to waist, arm length, leg length etc..). Swimsuits are an example of garments that rely on correct torso length measurements for proper fit to the particular figure. Provision is made for such figure types (shapes) as many manufacturers carry a petite range within the same store as their normal range. In this respect, the petite customer could class herself as a size 12, yet her body shape would segregate her from the average size 12 woman when shopping in a retail outlet that doesn't stock petite sizes.

The hollows and curves of the female figure are not the same from one woman to another, even if we have been conditioned to believe that women's figures are like to hourglasses. In Sheldon's *Atlas of Men* (1945) males and females are categorised by a particular somatotype (Goldstein, 1992, p.141). This system of body shape classification provides three specific categories that are applicable to men and women;

The Ectomorph - a slim, linear type of body (ill.29)
The Endomorph - tends towards roundness and body fat deposits in the abdomen, upper arms and thighs (ill.30)
The Mesomorph - is regarded as a physical type with much muscular development and little body fat (ill.31)

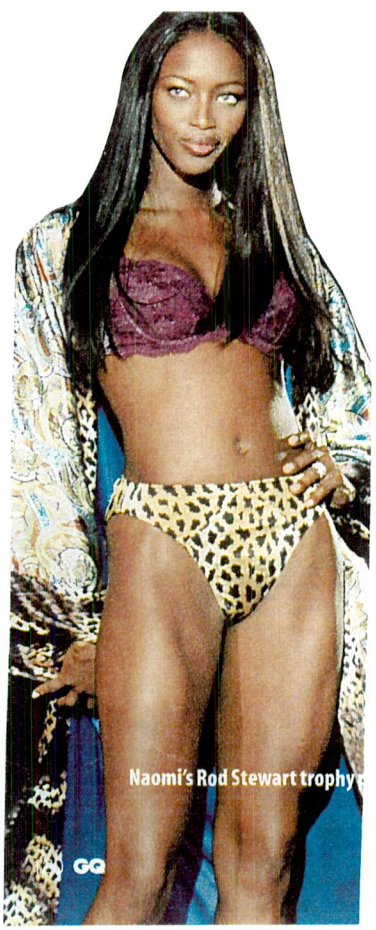
ill.28 -Height Differences of Bodies with the Same Horizontal Measurements



ill.29 -Ectomorph

ill.30 -Endomorph

ill.31 -Mesomorph



There is some relevance in categorisation of this sort, but it is rare to find a true mesomorph, endomorph or ectomorph. Most figure shapes could be any combination of the above.

As has been seen, size is not synonymous with shape. The two bodies in ill.32 have the same horizontal measurements but the figure shapes are different. The top form is wider from side to side while the bottom form is deeper from front to back. Many women can have a wider pelvic area, yet similar hip measurements to women who are narrow across the same area, but carry more flesh around the "love handle" bottom area. A garment can be the correct nominal size for the measurements of the customer, but a misfit when tried on some women who have a leaning towards the endomorphic figure shape, have fleshy hips and thighs but may have a very tiny waist in relation. Therefore, while a size 12 pair of trousers may be snug around the bottom and thighs, they may be gaping considerably at the waist. The same can be said for a woman who has the correct size 12 bust measurements but, her upper arm girth may be too large to fit a size 12 fitted top or shirt. This is where the issue of correct sizing as opposed to the notion of the correct "fit" of a garment, comes into the question.

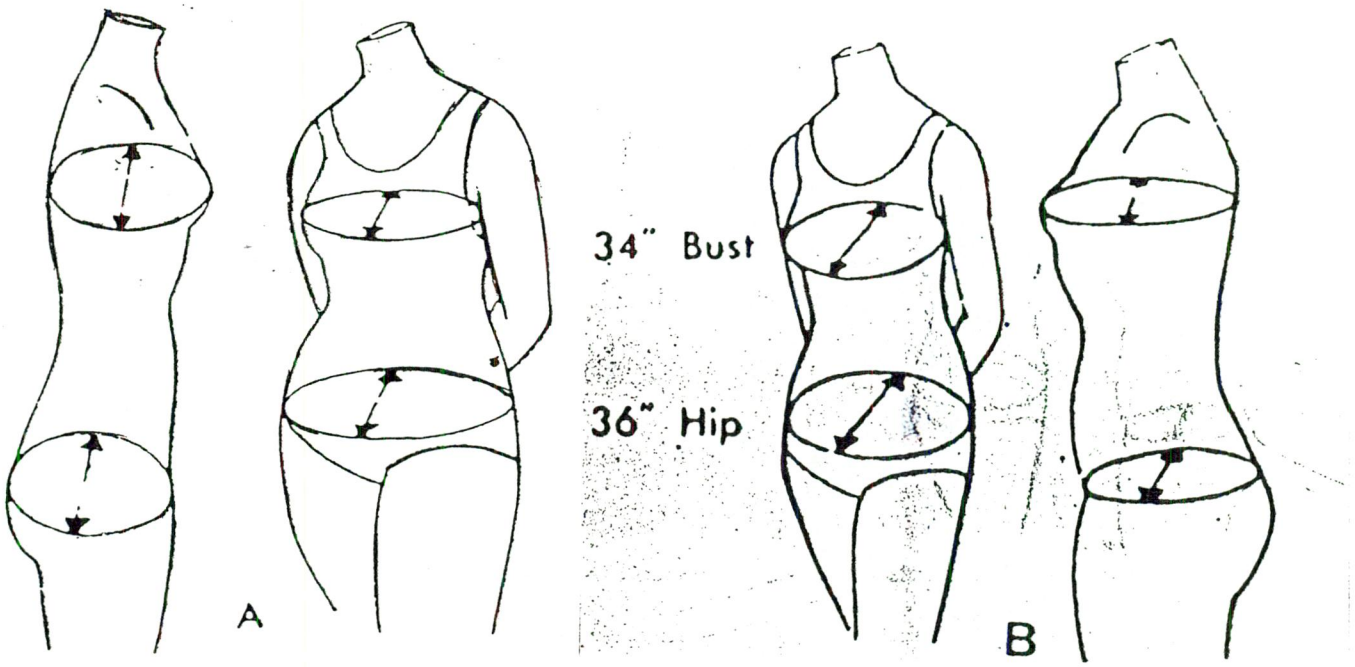
Although size 12 garments in theory, should fit the measurements of the size 12 woman, certain body-shape characteristics prevent this. Fit of the garment is a separate issue to size. A woman may fit into a size 12 pair of tailored trousers, zip herself into them and wear them quite contentedly for the day. But, the stitching straining at the seams is a direct indication that although these trousers fit the woman, they may not be the correct size. This, however, is arguable, as the agreeable way for the garment to fit his/her body is each individual's own opinion. If the woman in the example above is comfortable wearing the size 12 trousers, (even if the size 14 would allow the blood flow to her legs), it is her prerogative to do so. If the general effect on

the figure is pleasing to the wearer's eye, a detail such as a waistband being slightly uncomfortable is accepted.

The impact of cultural notions concerning economic status, religion, race, occupation and age can affect the personal opinions of individuals regarding the appropriate fit of the apparel they wear. A tightly fitted short skirt or "spray-on" trousers can provoke a negative assessment of the wearer, such as the wearer being promiscuous. Certain tightly fitted garments worn by women are seen as overtly sexy and worn to titillate the opposite sex. Some bra styles are suggested to be worn a size smaller to encourage a push-up, cleavage boosting effect (ill.33). Fit, in this case and the visual effect that a tight fit creates, overides the choice of a properly size coded garment.

Although there are predominant fashion trends at any moment in time, there are alternatives. The professional business woman look of the 1990's might be fashionable now and consist of body conscious tailoring but, an alternative to this in the form of the "bohemian" look also exists at the same time. A bohemian type of collection relies on drapery in the form of long skirts, smock tops and unstructured tailoring. There is very little resemblance between measurements of garments belonging to the tailored or bohemian styles so the shopper alternating between both looks will find that she can choose different size coded garments in both ranges to suit her body shape. The style of the garment affects how the customer views both the size and fit of the garment. A size 12 poncho-shaped top, with all its' folds of material retains the same validity to be referred as a size 12 as does a very slinky tight fitting tube top. It is, however, much more likely that the poncho top will accommodate larger sizes than the label states

ill.32 -Body-Shape Comparisons of Forms with the Same Measurements



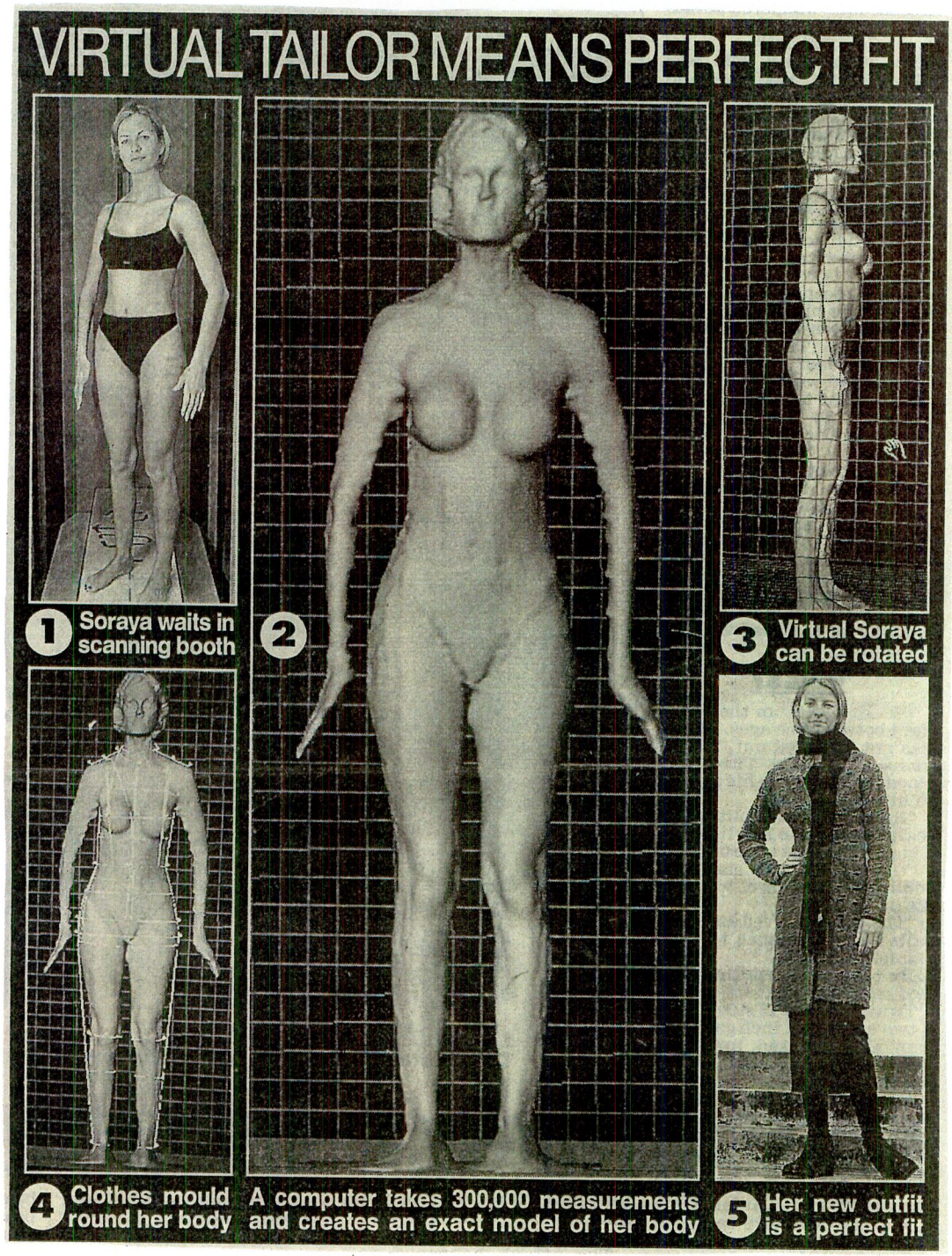
ill.33 -*Wonderbra* Advertisement

The arrival of Lycra in 1958 is also an element of fabric structuring that seems to affect the whole question of sizing in today's market place. One example of this is evident in the production of denim jeans today. Many manufacturers use denim with a stretch component such as Lycra instead of traditional denim when producing some styles of jeans. There are a few reasons for using stretch denim as opposed to traditional denim; one reason being comfort, another is the type of fit that jeans containing Lycra have on the body.

If two pairs of size 12 jeans were cut to the same pattern, one in traditional denim and one in stretch denim, a size 12 customer would fit both but, the pair containing a stretch element may accommodate a size 14 customer also. The look created would be a lot more figure-hugging than if she chose the same jeans in a size 14. By purchasing a smaller sized pair of jeans than you would normally choose, with a stretch element, the "sprayed on", "shrink-to-fit" look desired in the 1970's can now be achieved without hours having to be spent in the bath.

An alternative has very recently been offered to the sizing system of old, that tackles the issue of body shape as the most important factor of correct sizing, rather than metrical measurements. This innovation in 3-Dimensional shopping is known as body scanning. Instead of the crowded communal changing rooms we all love to hate, the customer steps inside a booth similar to a passport photograph booth (ill.34). When inside, a 3-D scanner uses infra-red lights to scan and read measurements from more than 300,000 parts all over your body. An image of your exact body shape appears on screen as well as over 50 measurements providing the shopper with traditional measurements such as waist, hip and bust girth and measurements of her inner and outer leg etc… This information is then stored in a bar code on a smart card, similar to a credit card.

ill.34 -3-D Body-Scanner



The measurements of the clothing available in any shop will also be held on computer. On scanning the smart-card bar-code into this program, the computer will automatically choose garments that will fit your exact size. It might be a size 12 in one garment and a size 16 in a different style garment but, even if the size designation system is still not unified, the hassle of trying on a multiplicity of sizes in one garment is reduced.

Although, it is early days yet, and this facility is not widely on offer to the public, it is obviously something that the government in Britain is taking very seriously. A £3.4 million research grant has been awarded to the development and application of such scanners that are predicted to be in widespread use by the year 2001. Philip Treleaven, the project leader said; " It will be the biggest revolution in shopping for a generation. Going to the shops to try on clothes could become a thing of the past" (Carey,1998,p.6). With all your vital measurements and a profile of your body shape stored on plastic, means that you may not have to leave your home to try on clothes to see what fits and what doesn't. The Internet is set to become the new High Street. This development has been backed by big name stores such as *Next, C&A* and *Freemans Catalogue*, and they hope that shopping by smart card will eliminate problems such as returns due to incorrect size and fit, especially in catalogue sales.

Whether this new system of shopping will catch on is still to be seen but there are other advantages to this 3-D body scanning. Further Anthropometric research can be carried out without inconvenience or embarrassment to the volunteers or having to employ teams of measurers which can be time consuming and expensive. Designers and retailers can regularly carry out their own surveys by scanning a few thousand shoppers to keep aware of body shape developments. Modelling agencies could use

this system to keep a record of their models' statistics on file and potential employers could "fit" the model into the clothing by smart card to see if he/she is suitable.

CONCLUSION

Having discussed the present day sizing system from it's disjointed beginnings at the start of the century to today, it is quite obvious that there are major issues involved that need to be rethought and clarified to ensure that there is a usable system in place for the future. As a new century approaches, the question that most needs to be asked in today in the clothing industry is; Is there any place for such a dated and obviously faulty system?

An answer to this question does seem to be emerging in the form of the 3-D scanning system discussed in chapter 3. If this technological innovation does succeed in establishing itself in the market place as has been predicted, the size 12 as we know it today will become extinct. Women will no longer be a size 12/14/16 but, each individual will be their own Ms.**X** size.

If clothing sizing is an integral part of the body language that relates to the female body, then this language could almost be described as "double-dutch" to most of us. As has been seen, no amounts of formulas or no dictionary definitions can help to decipher this language of the sizing systems; it remains a case of trial and error to successfully find the appropriately sized garment to fit your body size.

Even if the concept of being a size 12 becomes extinct, there will always continue to be an "ideal" figure type/shape that women aspire to. This aspirational figure ideal may be the ultimate goal but, in reality, for many women it will always remain unattainable. There are however, individual cultural standards of beauty around the world, different from the fashion-dictated "ideal", that are real, tangible and achievable by many. Being classified as an attractive, feminine person by these cultural standards does not, in many cases, rely on being a slim size 12. Knowing how to maximise your figure's best assets by the skillful adoption of certain, appropriate

clothing, can present the "not-so-ideal" female body as an attractively packaged figure.

In the Beautiful South's song "Perfect 10", they use the sizing terms; size 10, size 12, size 16, to provoke a universally established visual image of 3 different sized bodies. Most, if not every woman, will agree on the general size each body should look like and their connotations; size 10=slim, size 12=average, size 16=quite large. What cannot be agreed on, or understood, are the intricacies that lie behind applying these terms to a "real size" body and not just a generalised image.

While these are universally understood images in the mind's eye, we are much less sure about sizes when presented with a real body; our own or someone else's. With the upper limitations of one size being so close to the lower limitations of the next, it is a more complex issue that divides a size 10 dress from a size 12, than separating a slim body from an average one.

Maybe they should rename the song; "The imperfect size 10, that could also be a size 12 -or could probably pass for a size 8 for that matter"- this is a title that more women could relate to.

BIBLIOGRAPHY

- AIRD, Zoe- " On the Spot..... Size Does Matter"
  Looks - Sept. 1998, p.52

- ASH, Juliet & WILSON, Elizabeth (eds.)
  Chic Thrills – Pandora pub./London, 1992

- BAUDRAND, Catherine- " The Net's Big Fashion Thing "
  Cosmopolitian – March 1998, p.243

- BOXALL, Len (Sales Manager) – E-Mail: Sizing and Dress Stand Production
  Kennett & Lindsell Ltd. – Tuesday 24th Nov.1998/ Essex

- CAREY, Tanith – " Invasion of the Bodyscanners "
  The Mirror – Saturday, December 5 1998, p.6

- CHAPKIS, Wendy
  Beauty Secrets- Women and the Politics of Appearance
  Women's Pub./London 1992

- COOKLIN, Gerry
  Master Patterns and Gradings for Women's Outsizes
  Blackwell Science Pub. / Oxford 1995

- COOKLIN, Gerry
  Pattern Grading for Women's Clothes
  Blackwell Science Pub./London 1992

- EVANS, Caroline & THORNTON, Minna
  Women and Fashion : A New Look
  Quartet / London 1989

- EWING, Elizabeth
  History of Twentieth Century Fashion
  Batsford/ London 1974

- GILL, Michael
  Image of the Body - Aspects of the Nude
  Doubleday / N.Y. 1989

- GOLDSTEIN,Laurence (ed.)
  Figures, Styles, Speculations.
  University of Michigan Press/USA 1992

- HAGGARD, Claire,- "The Sizing Muddle ",
  Fashion Weekly no 1538 - 11th May 1989, p.5

- HORN, Marilyn J. & GUREL, Lois M.
  The Second Skin
  Houghton Mifflin/ Boston 1981

- KENNETT & LINDSELL LTD.
  Garment Stand Technology – Sales Catalogue
  Essex 1998

- KUNICK, Philip
  Modern Sizing and Pattern Making for Women's and Children's Garments
  Philip Kunick Pub. / London 1984

- **Nightingales Mail Order Catalogue 1998.**
  Shropshire 1998

- RUBIN SULEIMAN, Susan
  The Female Body Western Culture Contemporary Perspectives
  Harvard University Press / USA 1985

- STAMPER, Anita A. & HUMPHRIES SHARP,Sue & DONNELL, Linda
  Evaluating Apparel Quality
  Fairchild Fashion Group / NY. 1991

- STEPHENS FRINGS, Gini
  Fashion from Concept to Consumer
  Prentice – Hall / N.J. USA 1987

- TAYLOR, Patrick J. & SHOBEN, Martin M.
  Grading for the Fashion Industry
  Hutchinson / London 1984

- TURNER, Lowri – "The 31 Statistics that are vital for a Perfect Figure"
  The Mail on Sunday, June 28 1998, p.44 – 45

- WINKS, John
  Clothing Sizes – International Standardisation
  The Textile Institute/ Manchester 1997