Aspirational bodies: fashioning new beauty ideals

Kathryn Brownbridge, Ruth Sanderson and Simeon Gill

Abstract

Fashion appeals to the aspirational nature of people, often depicted by designers via elaborate and stylised illustrations. In contrast to these unrealistic tall, thin representations, women in the UK are getting larger. Despite a growing availability of equipment such as body scanners which give accurate body measurements, there is a lack of guidance in literature available to assist with how to proportion larger figures. Fashion design is the first process for garment construction and dictates the proportion of the garment. If, as the literature suggests, designers are using unrealistic body templates, the process is compromised, potentially leading to fit issues and dissatisfied customers, a situation that can have a negative impact on body image.[1]

This study focuses on the apparent gap between the depiction of the female body during the process of fashion design and the actual size and shape of real women. It seeks to find answers to whether fashion designers do generally persist in creating these stylised images of the body and why. This will be through scrutiny of their practice, the templates they use and soliciting information about their perceptions of the bodies of the women they are designing for.

This study is preparation for case studies which will be conducted in the UK fashion industry to include semi structured interviews to assess how designers view new body templates developed to depict a variety of realistic body shapes found within a population of 3D scan data. In addition a critical review of the fashion drawings designers currently produce and observations of processes used during design development will be conducted. Critical factors that potentially prevent the adoption of a diverse range of body shapes will be identified and discussed.

Key Words: Figure drawing, sizing, fashion design, body image, plus size

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Introduction

The fashion media is frequently criticised for creating images that represent an idealised form of beauty that is unattainable for most women.[2] In Europe and the US, these beauty ideals have, in recent years, conformed to tall, thin, young, Caucasian models, unrepresentative of the general female population. It has been assumed that women aspire to this beauty ideal, even though it is likely that they may never achieve it. The fashion industry has been accused of exploiting these desires in order to encourage the purchase of products that are claimed to help

women achieve these aspirational beauty goals.[3] In addition to the use of this aspirational body shape to sell and market fashion products, what may be termed as aspirational or idealised proportional bodies are also used in fashion drawings and illustrations.[4] Previous studies clearly demonstrate how the body shape is manipulated in fashion drawing templates to reflect the fashionable body ideals of the time. Sanderson and Gill compared the proportions used in fashion drawing text books, to a population of female body scans and demonstrated the difference between real and idealised fashion bodies.[5] The process of design was shown to be informed by inappropriate and outmoded data regarding the female body. Figure drawing systems only provide guidance on how to develop one single proportional figure shape and this did not reflect the variation found in the scan population.

In accordance with the literature, students have a tendency to elongate their fashion figures and templates used within design development. This practice is influenced by entrenched ideas regarding the young, fashionable female body. Students were therefore using tools that limited their ability to apply creative solutions to real world situations. In addition, socially exclusive attitudes, prevalent in fashion, were being upheld. It is therefore argued that the use of proportionally unrealistic body templates within fashion design development restricts the ability of the designer to accurately interrogate garment proportions on body shapes that are proportionally representative of real women. The use of aspirational bodies within this context creates a dichotomy where designers set unrealistic proportions which the product developer or customer must correct or assimilate into their worn experience. As a result, a collaborative project between fashion design and anthropometric experts was initiated in order to develop methods to create templates that more accurately reflected body shapes within the population.

This research is a development of the original ideas and explores the use of the aspirational body within industrial fashion design practice. The impact on the garments being produced and subsequently the ability to create satisfaction for the diverse female consumer within potentially limited proportional design norms is discussed.

Existing themes within fashion and beauty

A   The aspirational nature of fashionable beauty
Acknowledging that fashion imagery can influence behaviours and perceptions, Barry conducted focus groups in order to gain insight into the complexities around the aspirational nature of fashion images.[6] The study suggests that it is simplistic to only focus on the size and shape of the models' bodies and in response develops a taxonomy of aspiration in fashion imagery. Thematic analysis of the focus group data identified that women used a number of criteria to assess whether fashion imagery reflected their aspirations. These included whether the image was perceived to be honest, empowering and socially responsible. Honesty related to ability of the participant to identify with the model and replicate the look. It was

judged to positively enhance the aspirational nature of the image if the participants felt they personally shared characteristics with the model and it did not merely just replicate the beauty ideal. Glamorous and fashionable creative direction was recognised as aspirational. Women were also concerned with what they perceived to be the internal qualities of the model, such as strength, intelligence and confidence, conveyed through posture and facial expression. Negative influences on aspiration were also identified. The participants related particular postures to issues of social responsibility such as sexual objectification and were hostile to what they perceived as dishonest practices such as airbrushing to create unattainable body shapes or facial features.

There are no clear answers to explain why there appears to be this cultural preference for thin bodies in western societies. A study by Boothroyd et al (2012) tested two key theories; firstly that visual diet (visual exposure to specific stimulus) has a considerable influence on preferences for specific body size.[7] Secondly that associative learning, in this case the association between body size and other influencing factors such as status and health influences preferences. Findings from the study appeared to indicate that women are influenced by repeated exposure of particular images and therefore cultural norms such as fashion beauty ideals are likely to influence preferences. It was also found that associative learning, where women were exposed to aspirational images of women of a range of body sizes were influenced by the association to status and health. The study suggests that women's aspirations can be influenced to change through exposure to different visual cues and would support the notion that variation in proportions of imagery presented would be a positive thing.

It has been shown that women respond to many different aspects of fashion images but aspire most directly to those that they feel represent them. However they may also find that they aspire to images that are unrepresentative of them if other aspects of the image appeals [8][9]. However as women who are purchasing clothing online aspire to many disparate factors represented within a fashion image, they may well find they are persuaded to purchase a garment displayed on a body that is not representational of their own because they are drawn to other factors within that image. They then have to mentally adjust their aspirational desires in order to accept how the garment fits their own particular body shape. It is worth exploring how this behaviour affects customer satisfaction both with the garment they purchase and the subsequent impact on body image.

B   Fashion attitudes: the body within design

The process of fashion design has been likened to myth making or a construction of narratives that shape identity and fuel hopes dreams and fantasies [10]. In terms of beauty ideals, design literature provides abundant evidence to support the notion that designers re-interpret the female body to create the body proportions that reflect their own personal perceptions of how a fashionable body should look. Originating from the Greek rule of proportion, the head is commonly used as a unit

of measurement within figure drawing systems [11] [12]. The classic Greek system states that the body measures eight time the length of the head [13]. The methods of applying this proportional rule within systems developed to generate fashion templates have been found to vary greatly[14]. Many favour fashion idealism over realism and increase the number of heads used to measure out the body in order to elongate the natural figure [15] [16] [17] [18] [19][20]. Commonly amongst these texts the extension is added to the legs rather than the torso, a practice that is claimed to create a more stylised appearance [21]. The number of heads used varies from eight to eleven. Although there is some acknowledgement that female bodies do not all conform to the same size and shape [22] [23], there does not appear to be an informed approach in terms of how to create templates that are representative of a broad spectrum of women.

C   The aspirational body within fashion product development
The propensity of fashion designers to prefer elongated figure templates, favouring idealism over realism is echoed throughout fashion product development. The clothing industry must contend with standardisation of the supply chain, whilst balancing customer satisfaction. Most companies use some form of fit model or dress stand as a means to assess garment fit during product development. Dress stands can also be used by designers to develop new design ideas three dimensionally through the process of draping or modelling [24]. Alvanon, a leading firm for size and fit solutions in clothing, provides standard dress forms. One of the functions of these tools is to maintain fit standards within global supply chains. Whilst this approach helps with communication, it sets a limited fit expectation, which if over applied reduces fit variation even more for consumers. Alvanon stands have also been found to conform to idealised beauty standards. The standard model advertised on the Alvanon website conforms to an hourglass shape [25].when defined through the FFIT system of identifying body shape [26]. This proportional standardisation has a direct impact on sizing systems and the subsequent availability or lack of availability, of garments that will fit a variety of body shapes and sizes. Gill and Brownbridge [27] discuss these issues and provide clear evidence to show that there is little standardisation of sizing systems within the offer of high street retailers in the UK, sizes vary from store to store. Most stores tended to have a sizing spread across seven sizes ranging from a size 6 to a size 18. It is misleading to use systems of sizing classification such as the UK 10, 12, 14 as specific units of scale. However in the absence of any other meaningful system, women have been found to relate personally to these sizing codes describing themselves as a specific size such as a 10 or a 12. The aspirational tendency can also be seen to influence women, who have been found to be pleased if they can fit into a smaller size than may normally be purchased [28]. Retailers understand this and adjust their sizing systems in order to flatter women into purchasing [29] [30].

Methods

This paper compares different methods of analysing body scan data to determine proportions when representing the figure. These figures and their proportions are compared against industry fit standards, set by commonly available dress forms. Further data is collected regarding the use of figure templates in the clothing industry during the design process.

The first method aimed to test the relationship between a scan population and a standard industry dress form, applying techniques related to sizing theory.[31] Having large volumes of body scan data and the facility to capture dress forms used to maintain fit standards provided a unique opportunity to compare fashion standards with population data. Using an industry standard Size 12 dress form, a population of 637 body scans of women aged 18-35 were compared to the fit standards imposed by the dress form. Selecting just four key measurements, (bust, waist and hip circumferences and height) and allowing tolerances typical of existing fit and sizing practice, it was possible to see how many of the participants within the scan population conformed to the size and shape represented by the dress form. In a similar test, a smaller batch of scans were compared to a size 12 fit model, used to establish fit standardisation for an internationally recognised UK retailer. This test used bust, waist and hip measurements only.

Analysis of body scan data provided the opportunity to create fashion templates for what may be considered a normal population of 637 body scans of women. Using shape classifications set by US researchers [32] the relationships between head length and key circumferences were used to define three new proportionally correct figure templates in the three main shape categories within the scan population. These figure templates were created for different figures within age categories from averages and variations with subset populations were explored using percentiles. To test the assumption that a limited and idealised body shape is used within the process of fashion design a pilot questionnaire was developed. The questionnaire also included questions relating to the potential use of fashion templates that were more proportionally representative. Eight simple questions, listed in table 1, were asked. After initial telephone conversations to gain permission to solicit responses from designers, the pilot questionnaire was emailed to a small sample of UK fashion companies that had been conveniently selected. These were then distributed to the designers within each company.

Results and discussion

A   Unrepresentative body shapes that set industry standards

When the body scan data from 637 women was compared to the scan of a standard industry dress form, only seven participants were found to have comparative measurements within the tolerances set (Height within regular height category according to major retailers, bust, waist and hip figure dimensions +/-2.5cm). Filtering first by height, then hips, bust and waist reduced the data from an initial 200 to 60, then 20 and finally

7, supporting the assertions that the greater number of measurements specified the fewer of the population match sizing categories.[33] Visual comparison showed that the bodies were proportionally dissimilar both side on (Figure 1) and when viewed front on, showed greater asymmetry than would be accommodated by the standard form. Further analysis showed only four scans were suitable due to variation in segment lengths (distances between key dimensions) as well as asymmetry and posture.
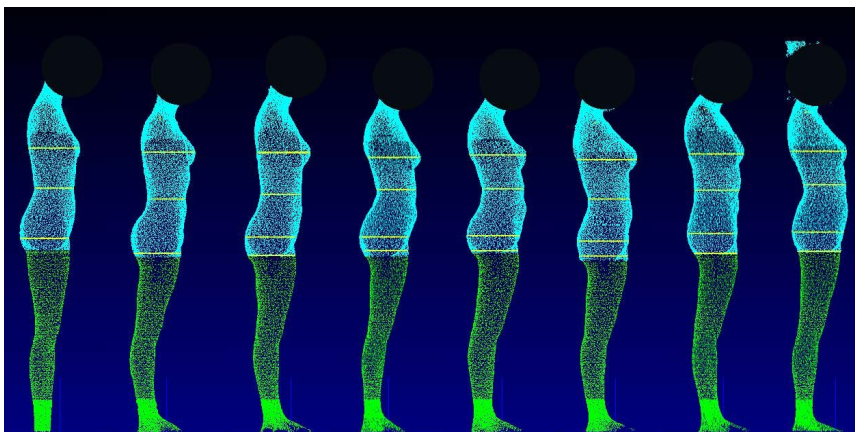

Figure 1: Side view of seven scans matching dress forms (Left) proportions

The second test compared the bust waist and hip measurements of a size 12 fit model to the participants in the data base. The Scans were filtered, primarily by identifying those who conformed to the hip criteria (50 participants), secondly those who met the waist criteria (30 participants) and finally those who fit all three Hip, waist and bust (9 participants). Figure 1 shows the scan images of the nine bodies with the size 12 fit model (first body on the left). Further visual analysis clearly shows postural and height variance as well as considerable variance in the position of the three key measurements (bust waist and hip, indicated by a horizontal white line). This shows that proportionally, the bodies vary greatly, though the fit model shows postural and proportional variation more naturally than the dress form, highlighting the natural variation which is often removed by idealisation for fit standards and figure representation. In relation to the process of design development these varying body proportions would have a direct impact on the creation of a proportionally balanced garment, demanding the application of a different approach to each body. Mass production does not enable the consideration of individual body shapes within fashion design practice however a more informed design approach must be an improvement on the use of idealised, unrealistic figures [34] [35] [36].

Scan 1 is a size 12 fit model for the brand, all the other scans would be adived to buy a size 12 garment from the brand (a major Uk high street retailer) based on their bust, waist and hip dimensions falling within the ranges covered by that size.
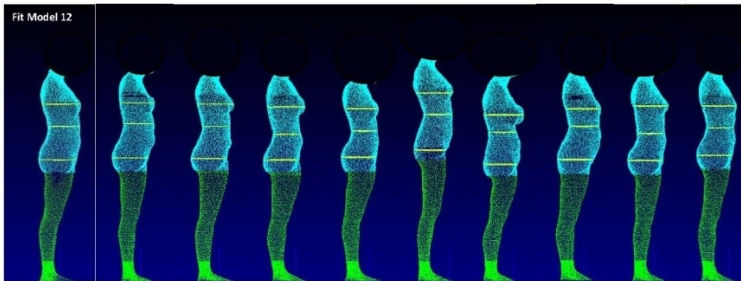
Scans are filtered by first identifying those who meet the hip criteria, then those who meet this and the waist criteria, finally those who fit all three Hip, waist and bust. This reduced 50 potential candidates to about 30, then to 9.

Figure 2 Comparison of size 12 bodies

B   Proportionally representative fashion templates

Through the application of methods previously developed to identify body shape within a population of scan data a new system of developing proportional figure templates was developed. Figures 3-5 show a new fashion figure templates that are proportionally representative of common body shapes found within populations. This system changes only the proportional relationships between the shoulder width, waist, bust, and the hips, during analysis small changes were noted within heights and segment lengths which would need to be tested against a larger population. Currently there has been no published analysis of how the vertical measurements can be used within body shape classification, so this system does not address the issue highlighted in comparison of scan populations to dress forms or fit models.

18-35 Bottom Hourglass Average
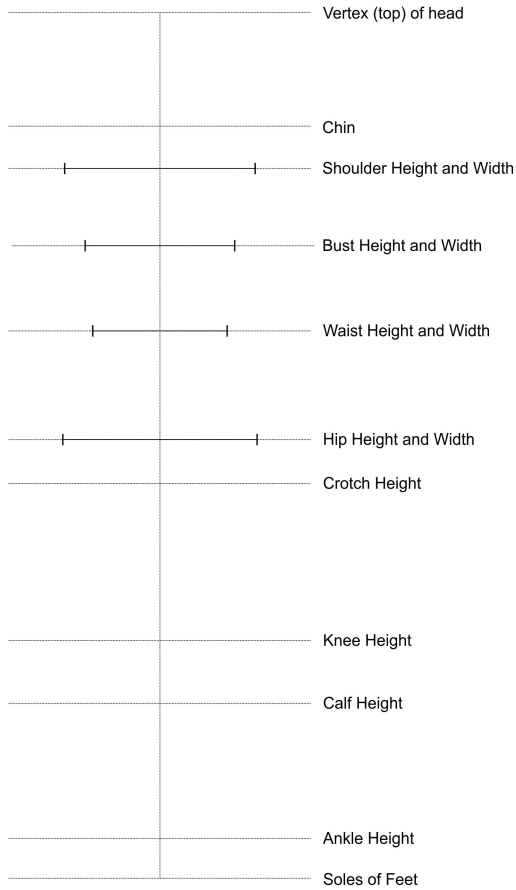(only widths changed, lengths from HG)

Vertex (top) of head

Chin

Shoulder Height and Width

Bust Height and Width

Waist Height and Width

Hip Height and Width

Crotch Height

Knee Height

Calf Height

Ankle Height

Soles of Feet

Figure 3: New 18-35 Bottom Hourglass figure template

18-35 Hourglass Average

Vertex (top) of head

Chin

Shoulder Height and Width

Bust Height and Width

Waist Height and Width

Hip Height and Width

Crotch Height

Knee Height

Calf Height

Ankle Height

Soles of Feet
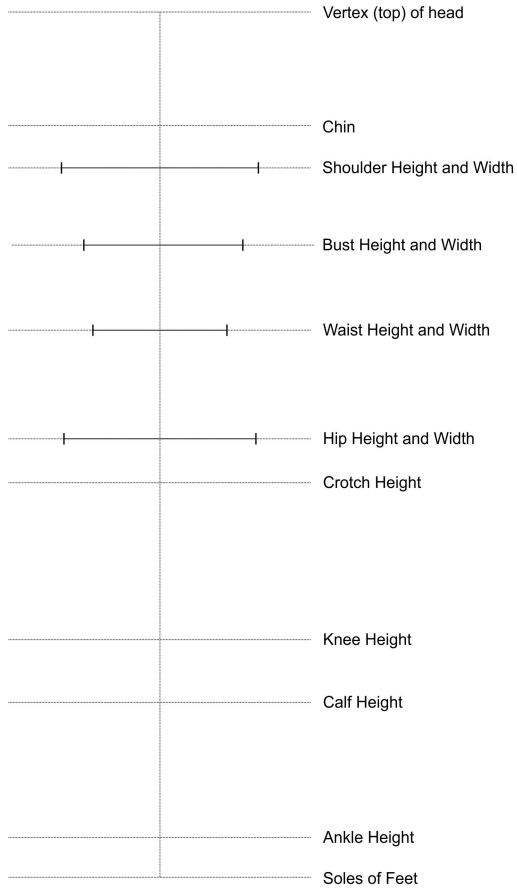
Figure 4: New 18-35 Hourglass figure template

18-35 Rectangle Average
(only widths changed, lengths from HG)

Vertex (top) of head

Chin

Shoulder Height and Width

Bust Height and Width

Waist Height and Width

Hip Height and Width

Crotch Height

Knee Height

Calf Height
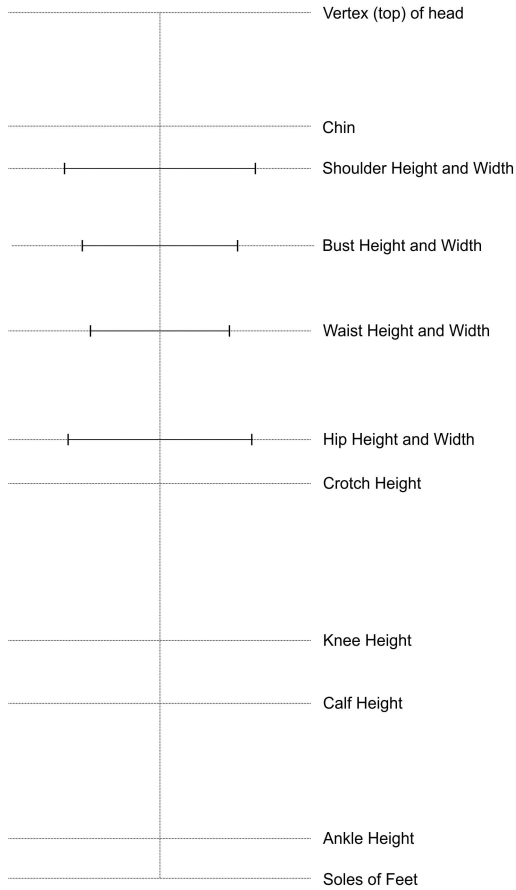
Ankle Height

Soles of Feet

Figure 5 : New 18-35 Rectangle figure template

C   Aspirational templates within industry design practice

Although questionnaires were sent out to four companies, only three sets of
answers were returned within the given time. One designer responded from
company one, three designers responded from company two but as they agreed on

all nine questions they only completed one questionnaire between them. Four designers responded separately from company three and their answers are not consistent. Their answers are therefore shown as percentages in table 1. The findings are only based on a very small sample, however they do show that the fashion design practice focusses on a very limited spectrum of body shapes and sizes.

Table 1 The use of figure templates within industry

Question	Responses company 1	Responses company 2	Responses Company 3
Do you design for specific sizing categories?	Yes	Yes	Yes (75%) No (25%)
If yes, which sizing categories do you design for?	8	8-14	8-22
Do you use figure templates in the design process?	Yes	No	Yes (75%) No (25%)
If yes please estimate the size your template conforms to?	8/10	NA	10 (75%)
Have you heard of the 8 head theory within figure drawing?	Yes	Yes	Yes
If accurate proportional figures or templates were available, would you use them in your design work?	Yes	Yes	Yes (50%) No (50%)
What body shape would you say your template conforms to?	Hourglass	Hourglass	Hourglass
Do you use garment templates or flats?	Yes	Yes	Yes (75%) No (25%)
What size would you say your garment template or flat relates to?	8/10	10	10 (50%) 12 (50%)

The results show that designers from all the companies are only focussing the lower end of the spectrum of sizes that UK retailers are commonly found to include in their size charts [37]. The majority of the designers use figure templates within their practice and these again were representative of a small sized body. The proportionally symmetrical hourglass shape was used for all the templates. The majority of the designers were aware of the eight heads theory suggesting that this system is still commonly used within training and education. There was strong interest shown in the potential to use proportionally representative templates. These results support the assumption that fashion designers focus on a body that conforms to a fashion ideal within their practice.

D   Reflections on 3D body scanning and the female body

During body scanning sizing surveys conducted by a team from Manchester Metropolitan University for major UK online retailers, it was noted that women were nervous about viewing the printed image of their 3D body scan. Comments about themselves were much more likely to be critical and proceedings had to be conducted within clear ethical guidelines in order to debrief participants and prevent them from reacting emotionally to what was considered negative aspects of their bodies. One successful strategy was to show them the scan image of the fit models, women who were known to the participants to represent body ideals. This 3D format is unfamiliar and strange and therefore difficult for the participants to accept. It was therefore helpful for them to normalise the image by seeing a familiar body shape captured in this strange and unfamiliar format. This result can perhaps be explained by visual diet mechanism where the participant's preferences have been influenced by a variety of visual stimuli [38].

E   Conclusion

This study discussed the use of idealised or aspirational figures within fashion practice. Although there are issues of social responsibility in the repeated use of idealised female bodies used to sell clothing, in business terms it is possible to see why those in advertising and marketing persist in this practice. However this study argues that within design practice the use of unrealistic fashion templates limits the ability of the designer to create proportionally relevant garments for the diverse body shapes found within populations. The study provides some evidence to show that design practice within industry reflects the generally accepted practices documented within the literature. The data indicates that designers only consider female bodies that conform to the slim, hourglass, fashion ideal within the design process. Analysis of a population of female body scans provides evidence to show that the majority of them do not comply to the body shapes used for templates. In addition only a very small number of the women within the scan population were found to comply to the size and shape of a standard size 12 dress form and a size 12 fit model. Visual representations of the scanned bodies clearly show how much variance there is, even amongst women that conform to dimensionally similar bust, waist and hip measurements.

Notes

[1] Sanderson, R. and Gill, S. (2014) 'Turning Figure Drawing on its Head' in <u>The power of fashion: 16th annual IFFTI conference</u>, Japan, 29-30 January 2014.

[2] Fisher, A. 'London Fashion Week: a catwalk row over size 14 models' The observer 20th September 2009

[3] Barry, B. 'Selling whose dream? A taxonomy of aspiration in fashion imagery' *Fashion, Style and Popular Culture* Vol 1 No 2 (2014) 175-192

[4] Sanderson, R and Gill, S (2013) 'Redefining the drawn body through investigations of proportional techniques' Oxford, UK, 10-12th September

[5] Sanderson, R and Gill, S (2013)

[6] Barry, B

[7] Boothroyd, L. J. Tovee, M. J. Pollet, T. V. 'Visual diet versus associative learning as mechanisms of change in body size preferences *Plos one* 7th November 2012

[8] Barry, B.

[9] Boothroyd, L. J. Tovee, M. J and Pollet, T. V.

[10] Erikson K. G. 'The Final sound' *CTF Journal* Swedish School of Textiles 2007

[11] Ireland, Patrick. John. *Figure Templates for Fashion Illustration*. London: Batsford, 2000.

[12] Drudi, E., and T. Paci. *Figure Drawing for Fashion Design*. Amsterdam: The Peppin Press, 2006.

[13] Simons, H. (1933) *The Science of Human Proportions*, New York, Clothing Designer CO., Inc.

[14] Sanderson, R. and Gill, S.

[15] Thames, Bill. *Drawing Fashion*. New York: McGraw-Hill, 1985.

[16] Ireland, P.

[17] Riegelman, N. *9 Heads: A Guide to Drawing Fashion.* . Vol. 3 revised, LA, USA: 9 Heads Media, 2010.

[18] Szkutnicka, Basia. *Technical Drawing for Fashion*. London: Laurence King, 2010.

[19] Abling, Bina. *Fashion Sketchbook*. New York: Fairchild, 2012.

[20] Mckelvey, K. and Muslow J. *Fashion Design Process, Innovation and Practice 2012* Whiley and Sons Inc

[21] Burke, S. *Fashion Artist*. 2nd ed.: Burke Publishing, 2006.

[22] Szkutnicka, Basia

[23] Abling, Bina.

[24] Di Marco, S. M. *Draping basics*, New York, Fairchild Books 2010

[25] Gill, S. and Brownbridge, K. (2013) 'The myth of standard size' in <u>Beauty 3 Conference</u>, Oxford, UK, 12-14th Sep.

[26] Lee, J.Y., Istook, C.L., Nam, Y.J. and Park, S.M. (2007) 'Comparison of body shape between USA and Korean women'. *International Journal of Clothing Science and Technology*, Vol. 19, Issue 5, pp. 374-391.

[27] Gill, S. and Brownbridge, K.

[28] Brownbridge, K. (2012) *The development of a conceptual model for anthropometric practices and applications regarding complete garment technologies for UK women's knitwear industry* Thesis in partial fulfilment of a PhD Manchester Metropolitan University

[29] LaBat, K. Sizing Standardisation, in Ashdown, S.P., Editor. *Sizing in Clothing: Developing Effective Sizing Systems for Ready-To-Wear Clothing*, Woodhead Publishing. (2007).

[30] Kennedy, Kate. "What Size Am I? Decoding Women's Clothing Standards." *Fashion Theory* 13, no. 4 (2009): 511-30.

[31] Gill and Brownbridge [Myth of standard sizing]

[32] Lee et al.

[33] Robinette, K.M., Vannier, M.W., Rioux, M. and Jones, P.R.M., (1997). *3-D Surface Anthropometry: Review of Technologies.* NATO Research and Technology Organisation (AGARD-AR-329).

[34] Riegelman, N.

[35] Ireland, P.

[36] Burke, S

[37] Gill and Brownbridge

[38] Boothroyd et al.

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