Construction of a tailor's mannequin customized to the female body type

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The paper investigates the problem of the fit of women's clothing with regard to the specific body shape. In doing so, the tailor's mannequin is investigated as a necessary useful item in the work of every fashion designer. Through the theoretical part, the topics of the history of the tailor's mannequin, the types of female body shape, as well as the problem of determining the size of clothes are covered. Emphasis is placed on custom tailoring mannequin construction for non-standard clothing size. In the experimental part of the work, a unique tailor's mannequin adapted to the body measurements of a specific type of female body was designed and made.
Keywords: *tailor's mannequin, anthropometry, body shape, construction of women's clothing*

1. Introduction

This research was motivated by the problem of finding a suitable item of clothing that will fit equally well in the waist and hips area, given the larger difference in measurements between the two mentioned girths. The problem undoubtedly arises from the accepted standardization of sizes that rules globally, and thus does not offer customized models to each individual customer. The solution can be found in individual made to measure production, and the necessary tool for such an approach is a tailor's mannequin. Chronologically, the historical development of the tailor's mannequin as a necessary tool in the textile profession is explored, from the wooden models taken from the studios of the artists of that time, to the innovative highly efficient models of today. Given that the paper also deals with the making of a tailor's mannequin, all areas on which the construction of such a mannequin is based, such as anthropometry, types of female body shapes, and the issue of the sizing system, were investigated. In the final part of the paper, the constructional preparation for the production of the tailor's mannequin and the rules applied in the experimental part of the paper are described.

2. Theoretical part

2.1. Tailor's mannequin

There are few tools in history that have contributed so much to fashion and the fashion world, and yet extremely little is known about them, i.e. there is so little available and documented information about how and in what way the tailor's mannequin improved and facilitated the work of creating fashion creations through the centuries. On the way to today, the tailor's mannequin went through different stages from a status symbol, to an item forbidden to the general public, to its peak in the form of daily exposure in millions of shop windows around the world. When making clothes, the pattern parts are temporarily applied to the three-dimensional model of the torso in order to determine the fit of the pattern or a certain drop of the fabric for the purpose of the representation of two- into three- dimensional and potential adjustments. Tailor's mannequins come in a variety of sizes and shapes for almost any

garment that can be made in a standard size or custom made for a specific person [1]. In each of these cases, the tailor's mannequin represents the client to the designer, and is therefore a necessary tool for the development of design and pattern. As the famous Hubert de Givenchy said: "The dress must follow the woman's body, not the body following the shape of the dress" [2]. The modern form of the tailor's mannequin developed from the exhibition models of the mannequins of the past.

2.1.1. Tailor's mannequins throughout history

Tailor's mannequins have been hand-made for centuries. One undocumented historical fact claims that tailor's mannequins originate from the time of the Egyptian pharaohs. In the tomb of King Tutankhamun, a wooden doll of the same body size as the king himself was discovered, thus proving the eternity of form and functionality in fashion [1]. The forerunner of the tailor's mannequin was the mannequins that painters used in their studios as a substitute for live models (Fig.1). Such three-dimensional, abstract depictions of men's bodies were ideal for draping fabric. Over time, such mannequins reached a higher level of quality in France where

Fig.1 Painter's mannequin [3]

Fig.2 François Roubiliac: Anthropomorphic painter's mannequin, 1740 [4]

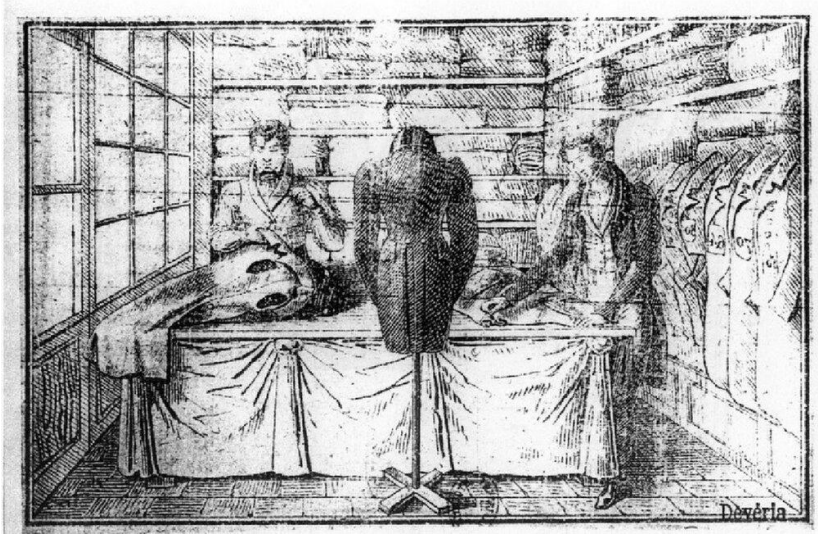

Fig.3 A tailor's mannequin in the workshop, approx 1826–1829, Pen and ink, Paris: Cabinet des Estampes, Bibliothèque Nationale de France [4]

they were made in human size with silk cloth coverings, perfectly tailored clothes and realistically painted faces (Fig.2). Artists continued to use mannequins to their full extent, but in the 19th century they moved from the painter's studio to the tailor's workshop. There is extremely little documented research on the tailor's mannequin as a tool for making patterns and clothing, but tailors were using them both for making and presenting clothes in shop windows in the early 1820s. The emphasis of 19th century tailors was on perfect pattern and fit, so to perfect their craft, they replicated the male body using steam-treated woolen fabric and subsequent finishing with linen fabric coated with glue or starch substances. The result of this new approach to the manufacturing process was a reduction in the number of client's garment trials as opposed to using a tailor-made technique using paper and notches that the tailor would take for each individual client. After the French Revolution, with the invention of the metric system, new methods and teachings in the construction of clothing were published, such as Beck's costumomètre (1819), Sylvestre's corsage mécanique (1829) and Delas' somatomètre or bodymetre (1839). Mathematical abstraction became the norm in clothing construction, it was difficult to transfer complex garments made from 2D patterns to 3D bodies without the possibility of mistakes, so the tailor's mannequin became a necessary work tool, Fig.3 [4]. In addition to male tailor's mannequins, in the first half of the 19th century there were also female mannequins, but unlike the more colorful mannequins for the representation of the male body, they were structures made of wicker or wire, and they were made by basket weavers or tinsmiths (Fig.4). Female mannequins were used to make dresses

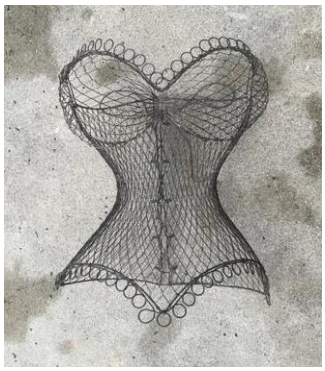

Fig. 4 Construction of a tailor's mannequin made of wire [5]

for middle and upper-class women who preferred to bring their fabrics to a tailor's workshop to make a custom-made dress, rather than buy standardized models [4]. The invention of the tailor's mannequin, as we know it today, is attributed to the French tailor Alexis Lavigne, as well as the invention of the tailor's measure tape. While the vast majority of tailors used their clients' approx. measurements, Alexis emphasized the importance of starting from the clients' body measurements to create a suit. His method was simple: draw a pattern according to the client's measurements and make a mold of his body in muslin to produce the finished garment after just one try on [6]. With the rise in popularity of sports among the bourgeoisie, especially horse riding, the need for women's riding costumes also developed. Riding habits relied on the fit of clothing rather than the femininity, embellishments, fabrics, colors and curves of the female body, so the use of a tailor's mannequin became essential in the creation of women's fashion as well. Alexis Lavigne recognized the entrepreneurial potential of the tailor's mannequin, and in addition to selling his riding costumes and other clothes, he sold unique mannequins that reached to the hips and were used to store dresses (Fig.5). Despite the fact that these mannequins had a target consumer group, wealthy women, by the end of the 19th century Alexis Lavigne expanded his range to include much cheaper standardized models of tailor's mannequins that were used in tailor shop windows and workshops (Fig.6).

1867 Belgian sculptor Frédéric Stockman became a maker of tailor's mannequins and started his company in Paris and industrialized the process of their production. By the 1880s, these body doubles had become indispensable tools of the trade and took up residence in the homes and studios of dressmakers [4]. The company he started is still in business and creates tailor's mannequins as well as display mannequins. His forms are made of paper and plaster casts of body models. Around the turn of the century, he entered into a partnership with M. Siegel, and today they operate under the name Siegel & Stockman [7].

After the industrialization of the production process, the tailor's mannequin went through a series of changes with the aim of perfecting the mannequin's form and functionality during work. 1880 John Hall was granted a patent for a tailor's mannequin designed to make skirts that could be adjusted to different sizes so that the tailor could get many sizes on one tailor's mannequin (Fig.7). Other innovators were making changes at the same time, each hoping to improve on the previous model. Theodore Parker Colby from Boston applied for a patent in 1903 to add arms to the existing bust shape. In the patent application, he wrote: "It is common for a tailor's mannequin to have an armless bust, so the dressmaker is forced to place the sleeves on a separate sleeve shape and then attach the sleeve to the rest of the garment either by guesswork or with the help of a human model". His patent was granted in June 1905. Between 1914 and 1915 there were several patent applications for various procedures that added bust extensions and hips augmentations. The Hall Borchert Dress Form company from New York was founded in 1908, between 1911 and 1921 they applied for and were granted seven

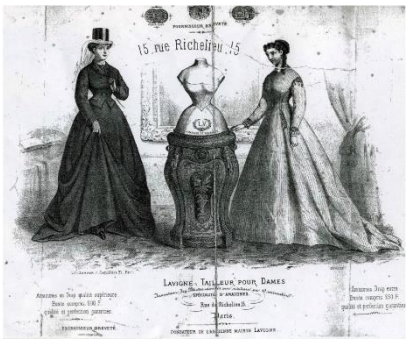

Fig. 5 Riding costume and unique tailor's mannequin from 1868 [4]

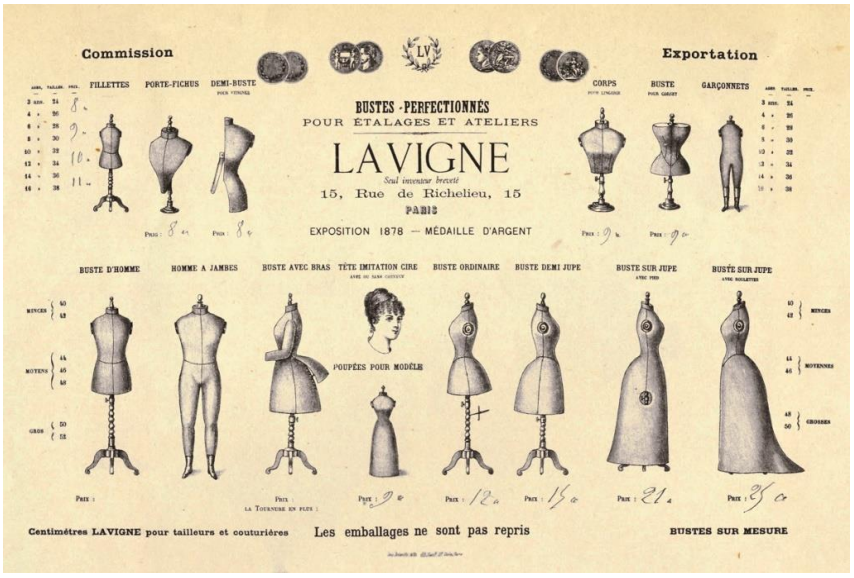

Fig. 6 Catalog of Lavigne tailor's mannequins [6]

Fig. 7 Tailor's mannequin according to John Hall's patent [8]

Fig. 9 Alvanon tailor's mannequins [9]

patents for improvements to the tailor's mannequin. Between the seven of them, Frank B. Grainger was credited with the patent for the adjustable stand of the tailor's mannequin. The patent shows a pedal that needs to be stepped on to raise or lower the tailor's mannequin. Also, another significant patent out of the seven approved is that of Jack Carl Jankus. The attached picture shows a model of a tailor's mannequin, which can be adjusted in size and proportions using movable panels (Fig.8). This model is a reflection of the awareness of the advantage of a shape that can be adapted to represent many different sizes and individual body proportions [7].

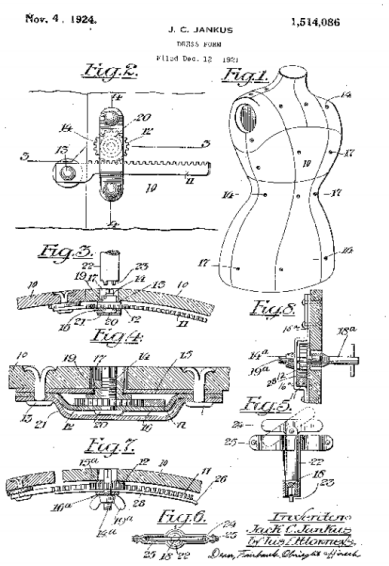

Fig. 8 Patent for adjustable mannequin by Jack Carl Jankus [7]

From the middle of the 20th century, not much changed in the production of tailor's mannequins until 2001 when Alvanon, Inc. introduced its innovative approach. Before Alvanon, tailor's mannequins did not faithfully represent the human form, although they had a basic bust, waist and hips, they more closely resembled the silhouette of the human figure. Using 3D body scanning technology, a tailor's mannequin with more realistic shapes was created, based on real bodies, which could help designers create clothes with a modern silhouette that would fit all body curves (Fig.9) [7]. In addition to the innovative approach in the form of creating a more realistic shape of the human body, innovations were achieved in the simulation of body temperature and sweating, the appearance, feeling and movement of human tissue and skin. These new models of tailor's mannequins are revolutionizing the process of fitting and improving the fit of garments, especially for specialized products such as jeans and intimate apparel.

Such tailor's mannequins more closely resemble the size, shape and physiological composition of humans, and represent technological progress in shortening the development of the production cycle [10].

2.2. Types of female body shape

The size and shape of the body is made up of a set of visible and measurable features resulting from the expression of many genes and their interaction with various environmental factors throughout a person's life, especially during growth. Such traits are part of complex traits. They are measured on a continuous and measuring scale and in the population they vary within a continuous wide range, so they take on a whole range of values, which is significant from the example of body height or the length, width and girth of individual parts of it. Given the high variability within populations, there is considerable overlap in the distributions of complex traits between populations. The variability of anthropometric dimensions at the population level is the subject of numerous scientific and professional studies, so anthropometry is applied in various fields [11]. When defining female body types, three dimensions are most often looked at: bust girth, waist girth

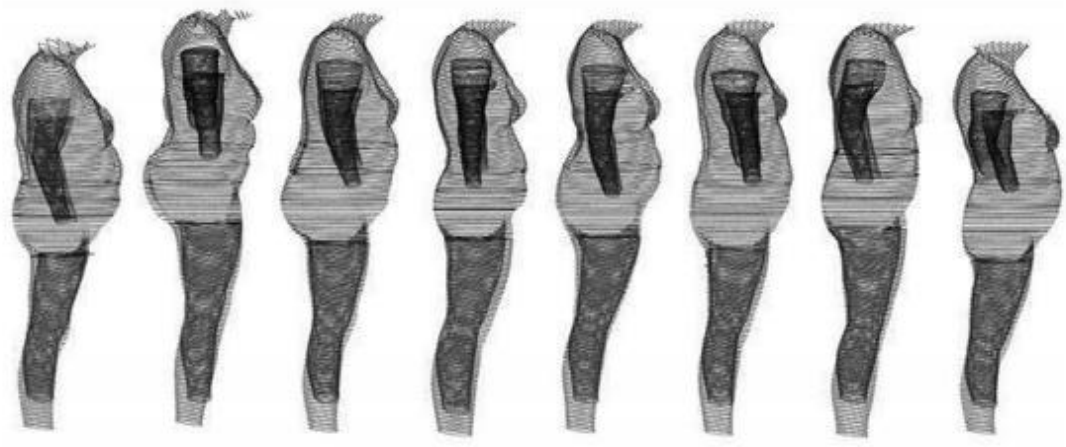

Fig. 11 Representation of a female body of the same body mass index with a different body shape [13]

and hip girth, but for a quality classification of female body types it is necessary to take into account body height, shoulder width and girths above and below the bust girth, waist and hips because two bodies can have the same bust, waist and hip girth, and be different body types [12]. An important factor in women, apart from the previously mentioned values, is the distribution of fat tissue. Women gain weight differently than men and fat is usually stored in the abdomen, thighs, buttocks, hips and upper arms (Fig.10).

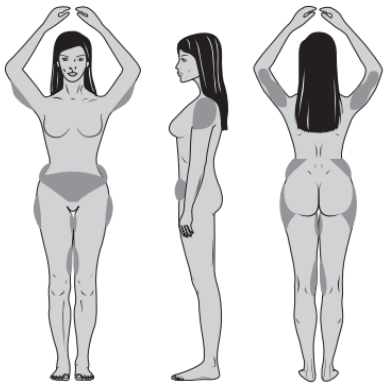

Fig. 10 Fat tissue distribution in women [13]

Fat storage can change as a woman ages, and fat can migrate from the hip area to the waist. Body shapes and sizes are constantly changing due to changes in lifestyle, nutrition, sports and other activities. It is known that during the last few hundred years, the body of an individual has increased and is still increasing at a rate of about 1 cm per decade [14]. The medical profession divides fatty deposits into two main forms - android type and gynoid type, more commonly known as apple and pear shapes. Apple-shaped people tend to gain weight in the abdomen, while pear-shaped bodies tend to gain weight below the waist in the hips and thighs [12]. The degree of obesity is most often expressed by the body mass index (BMI). However, the body mass index is not an indicator of body composition or the proportion of fat in the total body mass. Given that obesity is not determined by excess body mass but by an increased proportion of fat in body mass, BMI is in many cases not a reliable method and does not satisfy. The above applies mostly to athletes, physically active people and people with normal body mass and low lean mass [15]. Body fat is not predictable in the general population; everyone gains and loses adipose tissue in various parts of the body, therefore the BMI does not necessarily affect the shape of the body itself, which is confirmed by the representation in the following picture (Fig.11). Since people are different in height and body development, a comprehensive study of the human body is necessary. A large number of proportions must be studied to make clothing patterns. Proportions or relationships can be used to establish the correct mutual relationship of individual parts of the body, i.e. individual measurements. Based on the proportions, deviations of the body from the average build or its deformation can be observed. By analyzing different values, five types of female body are defined (Fig.12):

• TRIANGLE – determined by a smaller bust girth than the girth of the hips and buttocks, the waist divides the body into two disproportionate parts.
• INVERTED TRIANGLE – disproportionate body type where the upper part is larger than the lower part of the body. The girth of the hips is smaller than the girth of the bust, so this type is characterized by large bust and broad shoulders.
• RECTANGULAR – defined by approximately equal bust, waist and hip girths, an unpronounced flat waist most similar to a boy's figure.
• HOURGLASS – determined by approximately equal bust and hip girth with a defined waist that is significantly smaller in girth than the bust and hips, these characteristics result in a proportional figure.
• OVAL – characteristic of obese women, all body girths are larger and the waist is not defined [12].

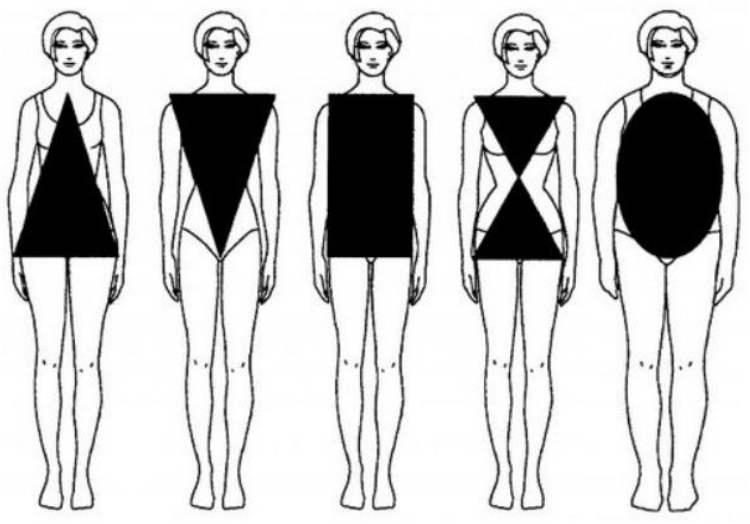

Fig. 12 Female body types [16]

When talking about fit and the right size - the fit of clothes primarily depends on the shape of the body. The body is three-dimensional, and when clothing is made that actually represents the three-dimensional shape of real human bodies, the clothes seem to increase dramatically [12].

2.2.1. Differences in body composition between populations

The characteristics of the human body that determine its shape vary considerably among different populations, reflecting the body's exceptional adaptability to the conditions of the physical environment, diet, and disease. Anthropometry plays an important role in researching the evolutionary significance of differences in body dimensions and proportions present among populations whose ancestors lived in different environmental conditions [17]. Measurements and description of the human body appear as early as antiquity, but rational and systematic body measurements and their recording arose due to the needs of early modern military organizations. By the mid-18th century, height was commonly used to classify people and identify them within military units, and procedures were then developed to measure individuals who were being recruited. In the 18th century, the first books on human growth were published, in which the authors were mainly concerned with the distinction of stature within a certain group of people in their time, and less with the distinction of the stature of the group over time. In industrialized countries, in the 19th century, differences in body height between certain classes of people were noticed. Differences in height were easily observed since the level of income had a strong influence on the average height of a person. Anthropometric research was primarily focused on the poor, and especially children in factories in England and France, and it was noticed that those employed in administrative jobs and professional workers were taller than ordinary and unskilled workers. It was also established that peasants were the tallest due to access to better nutrition and less exposure to urban diseases, however this advantage disappeared in the 20th century [18]. Many papers have been published on body dimensions and differences in body size and shape among different population groups, but there is significantly less data on female dimensions during anthropometric studies. As an example of research at the national level where a population difference in women was observed, the Croatian Technical Report HRI 1148:2012 hr can be singled out, which was created on the basis of a compound technological project Croatian Anthropometric System (STIRP HAS), carried out on the basis of the contract of the Faculty of Textile Technology with the Ministry of Science, Education and Sports (MZOS), within which anthropometric measurements were performed on 30,866 subjects in the Republic of Croatia [19]. Seven types of women's bodies were determined by anthropometric measurements, which are based on the difference in bust and hip girth shown in Tab.1. The results of anthropometric measurements in the Republic of Croatia are two new female body types, type a0 and type e0 [19].

Tab. 1 Seven female body types in the Republic of Croatia, which are based on the difference between bust girth and hip girth [18]

No.	Body type
1	**type a0 – especially narrow hips**
2	type A - very narrow
3	type B - narrow hips
4	type C - normal hips
5	type D – broad hips
6	type E - very broad
7	**type e0 - especially broad hips**
Under ordinal numbers 1 and 7 are female body types a0 and e0 typical of the female population in the Republic of Croatia	

2.3. The problem of the sizing system

One of the biggest challenges facing clothing companies today is to find an economical method that would ensure a quality fit of clothing. The main problem for

customers when shopping for clothes is finding clothes that are comfortable and fit them well. This is especially present in women's clothing, where customers must try on each item of clothing before purchasing, Fig.13.

Fig. 13 Illustration of the problems of the sizing system [20]

Studies on clothing satisfaction have shown that 50% of women cannot find clothing that fits them satisfactorily [21]. There is a simple and clear difference between the terms "clothing size" and "fit". Clothing size usually refers to the numerical or letter designation on the label of clothing purchased in a store. It is read from the clothing size system, and their labeling refers to the national population and is harmonized with European and international norms determined on the basis of anthropometric research.
A given size for a garment should mean that the garment will fit the customer. The question arises, does the item of clothing really fit the customer in that size? Clothing size, as a guide to clothing selection, is probably fine, but it represents a default selection of options that can satisfy an individual customer. At the same time, it is only an approximation, a rounded description of the actual body measurements of customers. Clothing size does not contain subtle differences in body shape and posture, but that is not its role. It enables clothing to be standardized and mass produced. Each customer usually chooses a manufacturer's brand that is as close as possible to the individual criteria that the individual uses to determine what really suits him. Consistency is one of the most influential factors influencing consumer purchasing decisions. Size standardization for clothing did not exist in the past. The need for it arose only at the beginning of the 20th century after the rapid development of industrial production. The specification of clothing measurements has an internal meaning for the clothing manufacturer, but has almost no meaning for the customer if it is not carried out and marked according to body size [22]. Some current clothing size systems are based on several decades old anthropometric research. In addition to the fact that these studies cannot represent today's population, they are often conducted on a poorly representative sample and for the period when they were conducted, since the respondents were often from one age group, one gender, and one geographic, racial or ethnic origin.
Also, this old data is not aligned with the way certain parts of the body have increased in size. Clothes also don't fit because clothing sizes are mostly based on an idealized body shape, for example that women's bodies are naturally hourglass shaped. In reality, the average female body is closer to a pear shape (narrower at the top, and wider at the hips). For example, the existing American system of clothing sizes ASTM is based entirely on the hourglass body shape. Analyzing data from the Size USA anthropometric survey, it was determined that this body shape is possessed by only about 12% of people through various categories of the clothing size system, while the majority of the population has other body shapes [23]. Body mass has a very limited value in determining clothing sizes because it is not a body measurement to which clothing can be directly adjusted. It can only roughly show the volume of the body - especially if it is corrected by height. Returning again to the woman's body and what would define its size, the most logical solution can be the hip girth, because unlike bust, which tend to change over the years in girth and shape, thighs are generally larger in girth and less prone to change in shape. Ideally, every product that people wear or use should be designed according to the body dimensions of the subject, which is especially true for clothing.

3. Experimental part

In this part of the paper, the process required for making a tailor's mannequin is described. The starting point is the collection of information about the history of the tailor's mannequin, and the selection of one of the researched models. The choice of model and construction of the tailor's mannequin cape corresponds to the individual body measurements of one of the authors of the paper (Z.R.). The goal of the experimental part of the work is a unique tailor's mannequin that will serve the purpose of further work and development of clothing construction and patterns for an individual female body type [24].

3.1. Construction preparation for the production of a tailor's mannequin adapted to the female body type

A clothing designer must know the proportions of the human body in order to know how to design a collection for a specific consumer. The clothing designer must know the proportions of the human body according to the clothing sizes in order to successfully transfer the designed drawing to the specific

Tab. 2 The main body and construction measurements for making a tailor's mannequin cape [24]

Body height (Tv)		= 160,0 cm
Bust girth (Og)		= 92,0 cm
Lower bust girth (DOg)		= 83,0 cm
Waist girth (Os)		= 71,0 cm
Hip girth (Ob)		= 104,0 cm
Bust height (Vg)		= 36,0 cm
Neckline width (Švi)	1/20 Og + 2 cm	= 6,6 cm
Scye depth (Do)	1/10 Og + 10,5 cm	= 19,7 cm
Back length (Dl)	¼ Tv	= 39,0 cm
Hip height (Vb)	3/8 Tv	= 60,0 cm
Back width (Šl)	1/8 Og + 5,5 cm	= 17,0 cm
Scye width (Šo)	1/8 Og – 1,5 cm	= 10,0 cm
Bust width (Šg)	¼ Og – 4 cm	= 19,0 cm
Waist width (Šs)	¼ Os	= 16,8 cm
Front part height (Vpd)	Dl + 1/20 Og – 0,5 cm	= 43,1 cm
Cup diameter	1/10 Og + 0,5 cm	= 9,7 cm

dimensions of the pattern. In order to make it easier to sort out the various numbers of clothing sizes, they should be divided according to the height and body structure of the person. The human body should be viewed based on the simplest division, which is standing height and transverse planes. Standing height is determined by the skeleton of the human body, from the top of the head to the bottom of the foot. According to the muscle mass and possible deposits of fatty tissue, the volume of the body is formed. According to the clavicles, shoulder blades and pelvic bones, the transverse lines of the body are placed, which are used for the construction and modeling of clothes [22].

The measurements needed to make a tailor's mannequin are: body height, bust girth, lower bust girth, bust height, waist girth and hip girth. The above measurements were measured on the body of the author of the paper [24] using standard procedures of anthropometric measurements.

After determining the main body measurements, the remaining constructional measurements are calculated from the formulas. The remaining constructional measurements required for production are: scye depth, back length, hip height, pattern length, neckline width, front part height, back width, scye width, bust width, waist width, cup diameter (Tab.2). Using the obtained construc-tion measurements, the pattern parts of the cape of a unique tailor's mannequin adapted to the female body type are constructed [24].

3.2. Construction and modeling of the tailor's mannequin's cape

The basic patterns of a woman's dress and bra were used as the basis for the construction of the tailor's mannequin's cape. When making the construction for the tailor's mannequin of individual measurements, the construction of the pattern of a women's dress with eyelets and inserted cups at bust height was used. The combination of the shape of the dress and the bra proved to be a

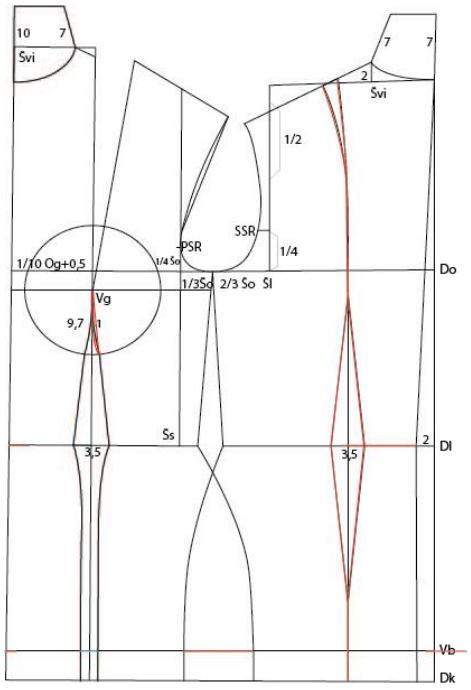

Fig. 14 Construction and modeling of the tailor's mannequin's cape pattern [24]

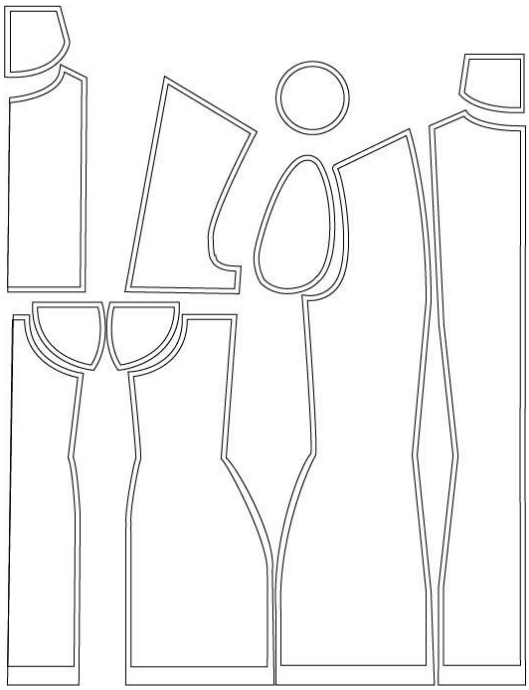

Fig. 15 Pattern parts of a tailor's mannequin cape with seam allowances [24]]

rewarding pattern for further modeling and shaping according to specific measurements. The process of constructing the pattern of the tailor's mannequin cape is based on the strict observance and distribution of the bust girth, waist and hip without accessories for wearing comfort. The excess amount of 9 cm, during construction in the waist area, is distributed on the front and back darts, while the amount of the deficiency of 8 cm is distributed on the line of hip height and is reflected in the curve of the front and back side seam (Fig.14). In the process of modeling the basic pattern, the front and back parts of the neck are added to the existing necklines. The cups are modeled by adding a curve on the straight join line to achieve a more authentic shape of the female bust. The dart in the sleeve area on the back is transformed into a shoulder dart, and then connects with the dart on the waist line and extends to the pattern length. With this modeling process, the pattern parts of the back of the tailor's mannequin's cape were obtained from three pattern parts. By mapping the existing curves of the armhole, a new pattern part is defined in the role of a kind of cover on the armhole, given that the tailor's mannequin model has no arms. By measuring the new neckline, the girth of the circle that encloses the mannequin's neck is defined. At the end of the modeling, ten pattern parts are defined for the front part of the tailor's mannequin and three pattern parts on the back part (Fig. 15), the front center is placed on the fold of the fabric. On the rest of the pattern parts, seam allowances of 1 cm are added, and 3 cm on the pattern length. The modeled pattern of the tailor's mannequin's cape adapted to the female body type was examined through the production of a prototype of a mannequin made of plain cotton linen (Fig.16).

Fig. 16 Work on the prototype of the tailor's mannequin [24]

Fig.17 A tailor's mannequin adapted to the female body type [24]

A lack of width in the neckline and volume in the bust area was noticed on the prototype. The identified deficiencies were corrected by deepening the neckline and increasing the curve on the cups [24].

4. Results and discussion

After the experimental part of the work, in which the construction and modeling procedures of the tailor's mannequin's cape tailored to the female body type and the work on the prototype of the mannequin are described, the results of the work are presented in this chapter. Initially, the made tailor's mannequin was shown, and then the results of the fit of the garment were compared on the tailor's mannequin and the model, Fig.17 and 18. When making a tailor's mannequin adapted to the type of female body, a stiff and firm decor fabric was used, such as

Fig.18 The result of fitting a dress made to measure using a tailor's mannequin [24]

those used for upholstering furniture. The reason for choosing this material is solely to avoid the potential increase in girth in the area of the bust, waist and hips when stuffing the tailor's mannequin, which would be possible if the material used contained a percentage of elasticity in the direction of the warp or weft. In that case, the experimental part of the work would not meet the set goals. The tailor's mannequin is filled with ground sponge. For the purpose of functionality, the tailor's manne-quin is placed on a wooden stand and secured in the lower part. The height of the stand and the mannequin itself is ten centimeters higher than the body height of the author (Z.R.), the reason for this is the correct position for further work on the tailor's mannequin. In addition to making the mannequin, a final experiment on the fit of the garment, in this case a dress, was conducted, comparing the mannequin and the model. The result of the experiment was photographically documented (Fig.18). This proves that the goal of the paper has been achieved: by using a tailor's mannequin adapted to the female body type, a satisfactory fit of the garment was achieved, i.e. the problems of a too tight fit in the hips area or a too wide fit in the waist area, which were observed when wearing standardized clothing, were eliminated, and a perfect fit was achieved in relation to bust position and volume. The tailor's mannequin will further be used in the independent production of clothes and the process of adjusting already existing patterns [24].

5. Conclusion

When it comes to clothing and its construction, whether it is custom-made or mass-produced based on size standardization, the focus should always be on the body the garment is wearing. A clothing designer must strive for a combination of functionality and aesthetics, while he cannot satisfy all consumers on the market, but he must strive to dress a specific figure, which is different from the previous one with each project. By making a tailor's mannequin adapted to the type of female body, the possibility of independent production of clothes has been achieved, which is characterized by a satisfactory fit, as opposed to dressing in standardized clothes. The construction of clothing found its foundations in individualization for the individual human body and should be used with such an approach. Clothes and fashion should help us express our moods and attitudes, and not be objects that create complexes and dissatisfaction [24].

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