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**A garment for the upper body with  
a collar  
and sleeves  
and buttons down the front:**

Shirts designed through patternmaking

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## Abstract

While garment design traditionally starts with a sketch it can also occur through the process of making a garment's pattern. I am designing men's shirts by manipulating a basic size medium men's shirt pattern. Though this design is framed by several factors, I have adopted the criterion that the shirts created using these patterns will not create any fabric waste, often referred to as "zero-waste pattern design".

Examples of shirts that meet similar criteria exist from the early 1800's. Often referred to as square shirts they were made up entirely of rectangles. These rectangles were sized proportionally from lengths of the body and the width of the fabric hence wasting little to no fabric. Rather than making patterns to recreate shirts from a time when they were inherently fabric efficient, the purpose of this project is to design shirts through manipulating the standard shapes of a modern shirt pattern with the parameter of not creating fabric waste and the aim of discovering shirts that could not have been conceived of through drawing.

The process has evolved through designing patterns for shirts and then testing the pattern and designing the shirts through construction. Over the course of the year I have developed a process for designing the patterns using a combination of Gerber pattern design software and Adobe Illustrator. I have constructed seventeen finished toiles and four half-scale mock-ups of shirts created using these patterns. Fabric length, width, occasional mistakes and fortuitous shapes arising from what would have normally been waste have guided my designs. Ongoing research into other designers who design through pattern making and to reduce fabric waste has informed my ideas and decisions.

In this research, I am questioning the predominant method of designing fashion clothing through drawing by exploring the potential of a specific approach to design through pattern making. My findings will add to the pool of knowledge on the benefits and limitations of the use of pattern making for the design of shirts that don't create fabric waste.

## Contents

<b>04</b>	Introduction
<b>06</b>	The Shirt: Historical and Contemporary Context
<b>16</b>	Creating Garments without creating Fabric Waste
<b>26</b>	Previous work which has informed this project
<b>30</b>	Developing a process
<b>36</b>	Shirts 1 -12
<b>72</b>	Shirts A, B, C & D
<b>78</b>	The Final Shirts: Shirts 13 - 17
<b>92</b>	Conclusion
<b>94</b>	Appendices
<b>102</b>	Bibliography
<b>106</b>	Image sources
<b>110</b>	Acknowledgements