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# Construction Of Nonexistent, Unknown, Surprising, Creative Volumes Using Flat Patterns

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Application of Accidental Cutting Methodology

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## Synopsis

In certain occasions, creative processes of volume genesis arise, are fed exclusively by technical processes. The elevation of the technical process as something integral to the creative process and object of material and volumetric research, is something which was experienced by prestigious designers who were at the same time architects, or studied architecture: Paco Rabanne, Gianfranco Ferre, Tom Ford, Pierre Cardin, Gianni Versache, etc. In this sense, from interdisciplinarity there is the possibility of influencing a foreign field, modifying it. In this case the focus is on a very specific area, experimental pattern cutting, and a particular method - Accidental Cutting, intellectual property of the author of this article, an architect. The method is focused on obtaining original and unknown volumetries, nonexistent until now, from abstract patterns and without volumetric reading, which has applications in fashion, and another fields inclusive architectural design.

**Key words:** Serendipity, experimental pattern cutting, experimental design, pattern cutting, experimental pedagogy.

## **1. Technical processes / creative processes. Creative pattern cutting**

In some cases, pattern cutting becomes the indissoluble phase of the creative design process and the pattern cutter and designer are necessarily the same person. In addition, the realization phase is fully integrated into the design phase. In these cases the design phase is not followed by the realization phase, and even in certain cases it does not exist.

### **1.1. Architects - fashion designers**

Certain fashion designers such as Paco Rabanne, Pierre Cardin, Gianfranco Ferré, Gianni Versace, Pierre Balmain or Tom Ford, were, or are, architects or studied architecture. Possibly, the understanding of the union of art with technique, as well as the knowledge of space through geometry and technical drawing, helped them to consecrate themselves as they were, prestigious fashion designers and architects at the same time (Seeling 2000). The interdisciplinarity originated by the training in another field opens up new possibilities and allows to articulate a language of its own, since a new and fresh vision is possible on certain aspects, importing solutions of other architectural matters in this case to the field of fashion design (Iszoro 2016b).

## **2. Experimental pattern cutting**

The experimental pattern cutting, at present, is nourished by some processes more in agreement with the architecture than with the fashion design, being essential the understanding of volumetric relationships through three-dimensional constructions and not in plane. This is a common denominator of the experimental pattern methods such as: Kinetic Garment Construction, Subtraction Cutting, Accidental Cutting etc. These methods apart from resorting to three-dimensionality at some stage of the process assume certain creative risks such as:

### **2.1. Uncertain results, serendipity and uncertainty**

### **2.2. Graphics, tables and images**

In the experimental methods of creative pattern cutting, experimentation can be understood in different ways, in some, concrete result is pursued, while in others it can be unknown and surprising

Serendipities, understood as lucky discoveries or finds, valuable and unexpected, can occur accidentally or causally, when we face the unknown, and some methods allow it, contrary to the opinion of Federico Soriano, that a method is a project (Soriano 2013). Some methods allow you to discover what is non-existent.

In this vision of pattern cutting, it is about generating new possibilities, experimenting, creating new interesting things that can unexpectedly surprise "(Roberts 2013, 31-32). As a symbolic image of what Roberts expresses in these phrases, there are two clips of the video Cutting Backdrop in which a collaborative experience of The Cutting Circle was recorded, shared by the designers Timo Rissanen, Julian Roberts and Holly McQuillan (fig.1).



It is about obtaining a pattern by drawing the outline of a person. In this case the one that draws is Roberts and the one that serves as "outline" of obtaining the pattern is Rissanen. These images are significant because they symbolize that in the pattern cutting design anything goes, any shape is likely to become a pattern and also reinforces the idea that the pattern should be more human, for man and not a mathematical science. Both patterns, the cut and cut out, can reach volumes but we do not know in what way or what volumes they can generate. It is unknown if they are going to unite with each other or with other different patterns, nor are union marks perceived, so in the beginning everything is unknown. The apparent formal relationship with the human figure is at the same time symbolic as totally uncertain and random. These two patterns can result in a volumetric design not previously imagined by the mind. Processes of this type can lead to new solutions, since design based only on our imagination can inevitably tend to copy, even if unconsciously (Rissanen 2013).

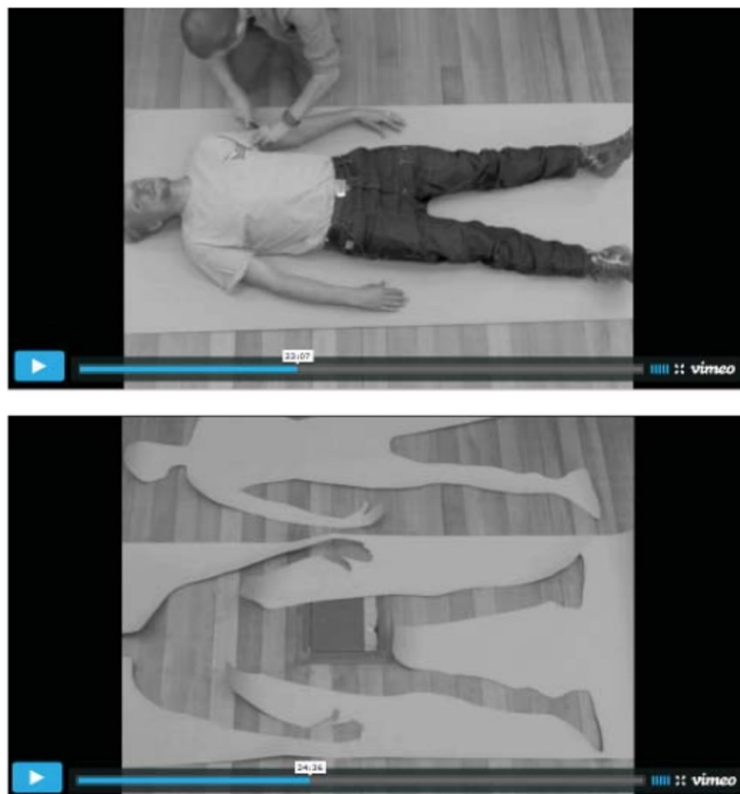


Figure 1. Julian Roberts draws the silhouette of Timo Rissanen, Cutting Backdrop - video (Roberts, 2014).

### 3. Accidental Cutting

In this line, the Accidental Cutting experimental pattern cutting and design method is developed.

The method enables to generation of unknown formal results: is focused in finding, and not looking for, the non-existent. Accidental Cutting refers to constructive and projectual method of obtaining complex volumetrics as well as pedagogical and research methodology.

Below there are exposed some aspects of the methods that enable the genesis of uncertain results:

### 3.1. Absence of volumetric reading, abstraction

The key to the method is to treat all patterns in an abstract way, whether they have a clear volumetric reading or not. In fig. 2 are presented three patterns, a sleeve, a cube and an abstract pattern. The volumetric reading of the first two is clear, however the third pattern is not known to what corresponds, what volume can constitute joining with itself or with other patterns. It is also not known if it can be related to the human body or any other object. This pattern therefore has no clear volumetric reading. In the Accidental Cutting method, it is essential to understand not only this but all the patterns in this way, including the first two, the sleeve and the cube.

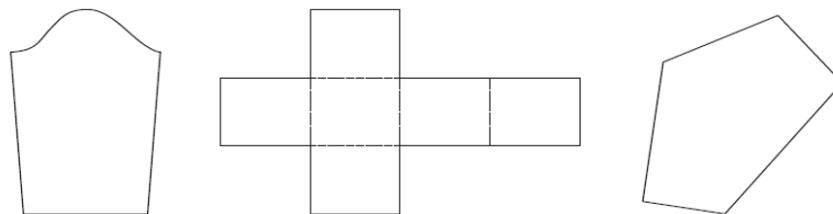


Figure 2. Patterns with and without volumetric reading.

### 3.2. Geometric versatility of the flat pattern in relation to the volume

Any pattern is basically composed of two elements:

A-Concrete surface

B- Volume construction marks

When any of these two elements is altered a new pattern arises, that is, two patterns with exactly the same surface and different construction marks, constitute distinct patterns, since they are likely to give rise to distinctive volumes.



Figure 3. Versatility of the flat pattern in terms of volume conformation. Pattern in the form of "x", models obtained with it, and an application in clothing.

### 3.3. Relations of the patterns with each other and with the format space

The Accidental Cutting methodology involves the knowledge and exploration of some specific concepts of the method, which make it possible to obtain a greater quantity of differentiated volumetries applicable to fashion or design.



Figure 4. Prototype and the corresponding pattern, applying the Accidental Cutting methodology. Eufemio Fernández López, Third year ESDM 2014-15.

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## Biography

**Eva Iszoro.** designer and architect graduated at ETSAM- Escuela Técnica Superior de Arquitectura de Madrid, Architecture School in Madrid. Her studio is specialized in architecture and design and combines different projects understanding the project in a global way, experimental and without limits.

She develops her own fashion brand and researches in the field of pattern cutting and holds the first PhD thesis in creative pattern cutting and it's pedagogy in Spain presented at ETSAM Architecture School/ Polytechnic University in Madrid. She also is the author of a new experimental pattern cutting method: ACCIDENTAL CUTTING.

She teaches fashion design at URJC- Universidad Rey Juan Carlos, and ESDM- Escuela Superior de Diseño, in Madrid. Head of the International Relations for Fashion Design and Management at URJC.