FREE CUTTING

by

Julian Roberts.
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and make changes.
IMPORTANT DISCLAIMER:

These are not step-by-step guides or lessons!
I want you to trip up and make your own mistakes.
Forward!
In September 2002 I published online a selection of garment cutting techniques called the 'School of Subtraction Cutting', which I had used as the basis of several of my early London Fashion Week show collections. These techniques were free to view and share for 7 years.

In June 2006 I delivered my Professorial Lecture at the University of Hertfordshire entitled 'Against the Grain: Adventures in Creative Pattern Cutting', and embarked on a very slow world tour showing and demonstrating these cutting techniques live on stage and in classrooms to thousands of students, teachers and designers.

So far, I have managed to reach over 20 universities in the UK and give live demonstrations in over 17 countries.

During these travels in February 2009 the techniques were published in booklet form by the CFPD in California USA, whom I credit and thank for helping me reach new audiences in the Americas, and I took down the free online version.

I discontinued the printed booklet in August 2012, and am now releasing the techniques as a free PDF download without the limitations and restraints of cost.
I have found by experience that creative ideas travel much further afield when they are free of charge, and consequently end up being used more diversely and in more unlikely places, and where my techniques travel, I often follow too. This keeps me moving and practicing, and though it does not make me wealthy there is more joy in making fashion than simply making money and keeping ideas secret and exclusive.

For this book I have remastered the original 2002 version of my cutting notes, written in my own sloppy handwriting, and included a large selection of texts and images to give you some idea of what might be possible when words and cutting run free.

Julian Roberts, August 2013.
THE GREATEST FIGHT IN FASHION

The UNIVERSITY OF WESTMINSTER FASHION DEPARTMENT and The CUTTING CIRCLE Presents

TR PATTERN v SUB-CUT

Mr. TR Pattern
Mr. Subtraction Cutting

SHINGO SATO
CHAMPION

VS.

‘THE PROFESSOR’
ROBERTS
CHALLENGER

RINGSIDE IS WHERE IT’S AT ★ NO FACEBOOK ★ NO TWITTER ★

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WESTMINSTER UNIVERSITY HARROW CAMPUS
NOT OPEN TO THE PUBLIC
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The Textile Institute
Roy Godden Lecture

“construction IS material”
by Julian Roberts

Tuesday 17th January 2012
Royal College of Art
Jay Mews entrance

6.00pm Private View of the ‘RCA Work-in-Progress’ exhibition
6.30pm Drinks & Networking
7.00pm Lecture

£5 Members/£10 Non-members
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Tickets on the door
SUBTRACTION CUTTING

WHAT-IF
INTRODUCTION:

WHAT IS ‘SUBTRACTION CUTTING’?
I call this method of cutting garments ‘Subtraction Cutting’ because the resulting shape is created by the removal of fabric, rather than the addition of fabric. This removal creates empty space for the body to occupy, but also effects how the fabric drapes around the body. The techniques can be used to make womens or mens clothes, bags and millinery; or on a larger scale anything hollow such as a tent or lampshade.
'Subtraction Cutting' is an approach to garment pattern making that incorporates chance discovery, distance and the ability to cut fast and inaccurately without too much reference to numbers, fractions or sizing scales.

Pattern cutting and design are physical activities, they extend from the hand and eye, from rotations of the wrist, elbow & shoulder, but they also flow from the mind and its perception of spatial awareness, from the psychological processes of transferring ideas & concepts into 2-Dimensional patterns, which then construct in 3D.
The basic premise of Subtraction Cutting is that the patterns cut do not represent garments outward shape, but rather the negative spaces within the garment that make them hollow. Simply put, shaped holes cut from huge sheets of cloth through which the body moves.
Subtraction Cutting is DESIGNING WITH PATTERNS, rather than creating patterns for designs. When you explore new techniques and methods of making, you deal with chance, luck & hope. Sometimes you completely mess up; sometimes the mistakes are really much better than what you were hoping for; and sometimes you discover something about cloth you didn’t realize was possible.
CHAPTER 1:

3 TECHNIQUES OF SUBTRACTION CUTTING

(original 2002 version)
The Absolute basics:

This is a house: ① = an elevated view,

② This is the same house: ② = an aerial view,

③ and this is how to make one: ③ = a plan view, all sides are part of a single two-dimensional plane.
Geometry concerns the definition of 'space', and 'shape'.
lines drawn on a computer screen,
circles, triangles, squares, & three dimensional
forms, and mathematics, measurements, geometry,
A angles are all HARD.
They are abstractions, they are concrete, not fabric.
They are useful in describing 'how' something is
made, but not 'what' it will make, or result in.
This is a line:

1. \[ \overline{A \rightarrow B} \]
   the line from A to B separates the two spatially.

2. \[ \overline{A \rightarrow A} \]
   the line from A to A unites the two spatially, creating a shape:
   - a circle
   - a square

The space it defines is empty.
This is a tube

The tube is hollow:

A garment is just a hollow tube, and a pattern simply defines a negative-space, through which the body travels.

Ways of sewing nothing:

1. \[ \text{A square} \rightarrow \text{A tube with one seam} \]

2. \[ \text{A rectangle with a pattern} \rightarrow \text{A tube with two seams} \]
3. A tube with one seam, with volume at its centre.

4. A tube with one seam, with volume at its openings.
The Soft Rules:

- Fabric is soft. It bends, wraps, falls, moves: it's unstable.
- Gravity causes the pattern to fall in one direction: down. That's just the way it goes.
- You enter a pattern and you leave it. You pass through it, so the positioning of entrance and exit distorts the shape.
- The body moves. The pattern twists, pulls, inverts, flips, folds, concertinas, sculpts. It follows the movement of the body, but it also extends that movement.
This is a skirt:

1. FRONT = an elevated view pattern.
   
   the body passes through a tube to form a skirt.

This is a circular skirt:

2. BACK = an aerial view pattern.
   
   the garment is pulled upwards using gravity to form a tube.
This is a one-piece skirt:

3

[Diagram of a skirt with front and back labeled.]

= a plan view, the back & front part of a single continuous pattern.

4

This is another one-piece skirt:

[Diagram of another skirt with front and back labeled.]

But it mixes both an aerial & elevated view together:

[Diagram of a single piece of clothing with hem indicated.]
This 'dual' plan view can be applied to any tube:

eg:

- **Skirt**
  - elevated view
  - aerial view
  - dual plan view

- **Top/Dress**
  - front
  - back

- **Trousers**
  - front
  - back
  - right
  - left
  - waist
  - hem
These are just some basic things to think about when cutting:

- Patterns can rotate through more than one perspective, so consider a pattern as having movement.
- A pattern can fold, twist, roll, zigzag & tie itself in knots:
- So it's not just a picture, or a static view.
- It's more like a story which unfolds in stages, ending up in a garment.
- Pattern cutting is not all about mathematics & measurements: it's about space & balance.
Why use a ruler & pencil, when you can use a plants of wood, cassette box, biscuit tin & macerated pen to make the lines & curves you need.

Your hands, arms, legs & body length can all be used as reference when pattern cutting to understand space & distance, so incorporate yourself into the pattern.

Pattern-cutting is about possibilities & 'what if's,' & experimentation & fuck-ups & cool new things which unexpectedly surprise you. New ways of cutting come to life through a mixture of luck, risk & mistake. Being amateur is always an advantage.
Chinese Whispers

The following 3 techniques have formed the basis of many of the garments we have created over the last 9 seasons. Each one is deceptively simple to practice, and we have varied, reworked & extended these ideas each season to show that a single concept can express many different characteristics & styles.

As these pattern concepts involve a free-hand, non-representational approach to pattern cutting, they are in their nature hypothetical and open to interpretation. Whoever implements them, automatically adds something of their own style to them.

Explaining them & understanding them takes a lot longer than demonstrating & practicing them, so try them out.
The 'Tunnel' Technique

The basis of this technique is to understand how the body can pass through the surface of a pattern many times over, and is a cross between a simple tube pattern and a one-seamed tube with volume at its openings:
So in its simplest form it looks like this:

The two holes are sewn together internally to create a single hole through which the body travels:

The holes which are sewn together should be large enough for the body to pass through so should be larger than the hip measurement (i.e. => 90cm circumference for a size 10).

If we unfold the tube to view its pattern it would look like this:
If this is then extended to a much longer tube, with the tube folded backwards & forwards upon itself like a ‘fan’ or ‘conceitina’, multiple holes can be added through which the body travels:

[Diagrams of a folded tube with labeled sections]
The pattern would look something like this:

exit

\[\begin{array}{cccc}
\circ & \circ & \circ & \circ \\
D & O & B & O \\
\circ & \circ & \circ & \circ \\
\end{array}\]

entrance

At the moment, this is just a tube. The movement of the fabric backwards & forwards is also regular.

To progress this concept into a garment I will first explain some variations on this theme.
The folding of the tube in this demonstration has been straight. As seen from above, like this:

![Diagram of tube folding]

All 8 holes are positioned roughly in-line with each other, which when sewn together create 4 holes internally through which the body travels.

The central core of the pattern is structured, but the outer volume away from the core is unstructured and moves downwards with gravity. It does so in a uniform way, because the folding of the tube has been done symmetrically. If instead the tube is folded at random angles, and the positioning of the holes is varied, then the fabric away from the central core will fall asymmetrically.
The effect of this is to twist the original tube horizontally around the core, meaning that the back & the front of the tube rotates around the body. The pattern might look something like this:
Up until this point there has been no mention of garment type. We have been dealing with pure construction. Sometimes when I cut a pattern I am not thinking ‘shirt’, ‘top’, ‘dress’ etc., I am thinking ‘what can this shape do’, ‘what effect does it create’.
Working in this non-specific way allows you to see the result first & rotate it around the body's axis before you decide which is front or back. Similarly, you can flip the pattern upside down or turn it inside out & then decide what it is. You can also re-scale it smaller to make it into a sleeve.

The point is that you are not limiting the concept to either a single use, or to any definite outcome.

To apply this concept, try a tunnel technique to a garment. You may do so in a number of ways. Here are 2 possibilities:
create the very top section of a garment like this

Do this either by: 0 using a pre-existing block and removing any upper darts, or 1 draw round something basic like a T-shirt, or 2 draw around yourself or someone else, or 3 simply construct the lines by using measurements or draping.

Once you have this basic template, extend it downwards by at least 3 metres:
it should be much longer than a body, and wide enough so that a body has plenty of space within it. It need not be straight, it can be any shape:

or whatever!

sew the back & front together to make a tube.
It is important that the length and width of the fabric be correct, in line with the body's proportions. The length should be measured from the waist to the ground, ensuring it is not too long. The width should be taken at the bust to ensure it is not tight. The fabric should fit comfortably around the bust and waist, allowing for ease of movement. The fabric should also be of a suitable weight to maintain the shape of the dress.

The pattern should be cut to fit the body's measurements. It is important to remember that the length and width of the fabric will determine the final shape of the garment. The pattern should be properly adjusted to fit the individual's body measurements. In addition to the pattern, there should also be muslin samples available to test the fit.

When dealing with volume and space, the muslin samples should be used to ensure the garment flows smoothly and comfortably. The final dress should be made to fit the body's proportions, ensuring it is neither too tight nor too loose. Always check the fit and make adjustments as necessary.
An alternative to this first garment method is to start simply with a length of fabric:

when sewn this is no longer a tunnel, but a tube with a closed end:

next, lay your back & front shoulder templates down the tube at the closed end:

NB. See Appendix 1 to see an example of how to prepare a tunnel tube ready for Subtraction Cutting.
Trace around just the top half
(n.b. the two pieces can be positioned as close together or as far away as you wish)

Then join the side seams in a loop:

Then cut this section out (through the top layer only)
finally, sew the shoulders & side seams together
to create the top part of the garment.

**N.B.** with this method, the side seams
beneath the armhole will run out to
nothing.

The tube is then ready to be folded
and the core holes cut & sewn.

The pattern for a garment like this might
therefore look like this:
This is a subtraction method of cutting because the resulting shape is created by the removal of fabric, not the addition of fabric. This removal creates space for the body, but also controls how the fabric falls around the body.

Here are some examples of a concealing tunnel we have used:
There is another way in which you can use the tunnel technique, which we call the 'coil' method:

Instead of folding the tube like a concertina, you instead roll it over itself.

Side view:
The pattern would look like this:

The 6 holes in this example sew together to create 3 holes through which the body travels, and the two ends of the tube need to pulled outwards from each other to form a coil:
The 'Plug' Technique

If you take a sheet of fabric and cut out any shape like this:

Match the shape

The shape removed will fit back into the hole exactly by adding onto its outer edge twice the seam allowance.

i.e. if you use a 0.5cm seam allowance then increase by 1cm, or if you use a 1cm seam allowance then increase the shape by 2cm.

When sewn, this will lay exactly flat with no loss of width or length.

The two fit not because they are the same shape, but because they have the same perimeter (i.e. the line on which you sew).

This principle can be used to create volume & space in a flat surface by using equal perimeters, but conflicting shapes.
This is a continuous line cut through the surface of a flat sheet of cloth.

Let's say the line if measured = 300 cm

If I construct a triangle with an equal perimeter of 300 cm (i.e. each edge = 100 cm)

and add a centimeter around its outer edge:

then the two will sew together exactly with a 0.5 cm seam allowance.
The result is a conflict between the angular shape of the triangle, the curving lines of the hole, and the opposition of straight lines around the perimeter.

Because the hole pattern, unlike a square, triangle or circle, does not remove much physical volume from the fabrics surface, the addition of the triangle increases the surface volume creating a three-dimensional shape.
The scale of the hole & plug depends on experimentation. Multiple small holes & shapes create a repetitive relief pattern in the fabrics surface, whilst huge holes & shapes can entirely alter the surfaces structure.

Here are some examples in use:

1. **The hole** B \( \rightarrow \) B = 240 cm, so

   - The triangle perimeter B \( \rightarrow \) B also equals 240 cm (i.e., each side of the triangle = 80 cm)
   - A 1 cm seam allowance is the added to the outer edge of the triangle
   - So that when sewn with a 0.5 cm seam allowance, the two conflicting shapes fit together exactly.

2. **One-piece bias cut across**
To make sewing more exact and easy, you should put notches on the side and shape the seams. To allow for openings in the side slits, you should put notches on the side. I call this a glove dress.
Here is another example:

A spiral shaped hole
B → B = 280 cm, so the perimeter of the square B → B also equals 280 cm (i.e. each side is 70 cm)
A 1 cm seam allowance is added to the outer edge of the shape,
so when sewn with a 0.5 cm seam allowance the two fit.

I call this example a 'Square-Spirals' Dress:

This concept can be extended further like this:
a smooth spiral shaped hole

$\theta \rightarrow B = 260$ cm. A circle is then constructed with a circumference of 260 cm.

Another second spiral hole is then added into the first circle which also has a perimeter $C \rightarrow C = 260$ cm. So a second circle shape is constructed to fit this hole.

Finally, to reduce the weight of these additions, a hole is cut out of the second circular plug and closed (i.e. sewn) to form a half-circle seam.
This dress is created using a series of opposing plugs & holes, of addition & subtraction & in between shapes.

I call this version an “interface-spiral” dress.
There is another way in which this concept can be used. This time to add volume not only to the surface but also to an opening (hem or neck):

This basic one-piece seaming has a shaped hole sliced out of it, but this time the hole begins and ends at an edge (the hem). The distance around the hole $A \rightarrow B = 90\,\text{cm}$. A large circle is constructed much larger than the hole it fills, so that $A \rightarrow B$ fits the holes perimeter, but the excess simply increases the volume at the hem.
To control this excess volume, two circular holes are cut out of the plug, which join in a similar way to the tunnel method.

Here are some examples of this technique.
The pattern for this dress looks like this:

It has two holes cut into it, 60% of which end up at the outer edges (neck & hem). The two circles match the perimeters of the holes but also extend out from them to increase volume at the hem & neck. This is controlled by the holes within the plug shapes, which in this instance maintains the balance of the garment.
'Displacement' Technique

This is a concept that has already been touched on in the 'Tunnel' technique. I just didn't mention it at the time. It's the idea that back & front sections need not be located near to each other,
but that rather they need to either pull
the rest of the pattern with them, twist or
jump through hoops before they are able
to join together. The path of their
movement is 'recorded' by the trail of
fabric which follows them.

The example given in the 'tunnel' technique
description was like this:

NB. See Appendix 1 to see an example of how to prepare a tunnel tube ready for Subtraction Cutting.
This could however be expressed in a different way, by moving the back & front away from each other:

The two sections are also on different grains to each other.
Here is another method:

A circular piece of fabric is cut with a hole in the middle.

The back and front sections of the strip are then attached to the circle in a continuous looped stitchline. The side seams of the strip are joined only after the back has been rotated through the inner hole of the circle 2-3 times.
This causes the circle to twist as it follows the path of the skirt.

The body then travels through the tube of the skirt & also through the inner-mole of the circle.

These are examples of this technique:
This top is a variation cut like this:

The top is joined to the circle at the neck for the front, and at the hem for the back. The front then rotates 3 times through the inner hole of the circle before the side-seams & shoulders of the back & front are joined.
To take this concept further, the same rule can be applied to a tube rather than a circle:

The back is attached to the inner part of the tube.

The front is attached to the outer part of the tube.

One section is therefore inside, whilst the other is outside. They join by rotating the back through the circle cut in the tube & out through one end of the tube. This is repeated 2-3 times.
The result of this particular variation of the 'Displacement' technique looks like this:

whilst a strict version looks like this.

So that's the end of the lesson...

Hope these 3 techniques can be followed and understood – they are far easier to grasp when you put them into practice.
Our hope is that you can use them to inspire new variations and patterns which continue our playful & experimental example.

julian

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CHAPTER 2:

My Manifesto
(2010 version)
"Pattern Landscyey" by Julian Roberts © 2010. 9 pages.

NEW WORLD ORDER

Everything seems to start with a problem.
A problem I must solve, a problem I must overcome, or a problem I must create.

From childhood to adulthood we are taught to minimize error and risk, to aspire to be right rather than wrong, to get better grades and repeat good behavior, and to learn the right answers to the right questions. In a system where you are continuously assessed and given grades, awards, prizes and certificates of achievement, it is hard to truly experiment and take real creative risks, or allow yourself the space and time to learn by trial & error. By developing methods of design construction that allow for chance discovery, and which involve the unknown, it becomes possible to explore garments that evolve through error and waste. 'It's gone wrong' is usually the initial reaction to something new or unexpected... but look again with fresh eyes and you may well discover something curious or fall in love with the ugliness/strangeness of the shape you have chanced upon. If you allow yourself to make mistakes, then you will learn how to turn a bad situation to a good one, how to salvage something that has gone wrong, or turn something ugly into something beautiful just by shifting your aesthetic judgment. Its good practice to escape conventional notions of beauty and be positive about making the best out of whatever situation you encounter. 'Necessity is the mother of all invention' so they say, so give yourself a real problem to solve, a wrong to make right, and step outside your comfort zone. You may well accidentally discover something remarkable.

TECHNOLOGY IS SEEN AS FAST, BUT THE IDEAS THAT NECESSITATE THE TECHNOLOGY ARE EVEN FASTER. CREATIVITY WITHIN TECHNIQUE CAN LEAD TO NEW METHODOLOGIES, PROCESSES, EQUIPMENT, TECHNOLOGY & MACHINES.

Make yourself a measure.
We don't need rulers.
Put yourself in the very middle of the work.
Imagine yourself being tiny & small,
the size of a finger nail,
able to look at everything close at hand,
with wonder & amazement at its architectural scale.
Then imagine yourself being bigger than this room,
gigantic, towering above everything, all seeing.
You need to be able to both look upwards at very small things,
and to hover above looking down upon vast ideas.
Put yourself inside an idea looking outwards, and imagine cross-sections.
Dissect your work, pull it apart, reassemble things in alternative orders.
Imagine having x-ray vision piercing through lead and stone,
or observe the negative spaces between things, their hollow shapes & forms.
There is always more than one perspective or way of approaching an idea.
To seek reality, if reality is anything other than we already know, is an aspiration to madness. Education keeps us all deluded.

Why does civilization aspire to education & knowledge? What does the process of seeking prevent us from finding? From what truths does studying distract us?

There are things we plan/aspire to do, and there are things we are brought back down to earth to actually DO.

At the start of a new decade many new plans are being hatched. The theme I am developing here is that a map/pattern is not something that necessarily defines an already existing territory (garment), but rather a map can proceed the existence of a territory.

as the pattern is constructed and grows, so too does the world it represents.

We are permitted to trespass or go places we may not yet have access to or know how to reach: Both with creative patterns and maps, imaginary garments and places.

The Pattern within the pattern within the pattern.

The pattern isn’t the paper or the card
It isn’t the ruled lines, the pencil marks or chalk lines
The pattern isn’t the garment in 2D, isn’t the diagram or plan,
It isn’t the template-thing that exists within a neat perimeter space

The pattern is the irreducible, the geometric DNA fingerprint,
The whole universe warped and bent into shape by the mind’s eye,

By mad desire, delusion or beautiful disease,
The pattern is human, is me, it’s in my head, it’s in my blood, it’s my body in movement,
in spasm and knee-jerk reaction,

it’s my relationship with everything big and small, sweet and sour, the shadow I cast, the trail I follow, the map I leave behind for others to become wrapped, clothed and deliriously lost within.

"The pattern is me:
It reveals my thinking,
your actions, your hands, my movements, my personality as a designer."

First finger angling,
walking finger tip to toe along paper creases and folds,
flipping zig-zag fans like a croupier,
then pivots of the wrist,
electric-shock-like up the arm to the elbow,
then shoulder,
body rocking,
measuring with finger-widths and walks,
hops, skips, jumps,
bounding, gesticulating,
this much, that much,
shoulder widths, arm lengths, strides,
leaps into the unknown,
picking the fabric up,
spinning it round and over and inside out,
at a flick of the wrist,
like pulling a cloth off a dining table
or a bouquet out of a sleeve,
2D to 3D,
falling with gravity and against,
floating to the ceiling, impossible and real,
a stop-motion dancer subtracting space,
creating room to manoeuvre,
jumping inside and vanishing from view,
rabbit into hat.

I have a good sense of direction,
but I find units of measurement too abstract & terminologies relating to direction confusing:
left, right, X, Y, latitude, longitude.

I prefer to measure in relation to myself: in finger widths, inches, hand spans, arm lengths, body widths, steps, strides & jumps.

When you give an idea away, you get to see how it functions in other peoples hands. They reinterpret it, go 'wrong', chance upon a new use for it, push it in new directions, and make hybrid versions of your techniques crossed with theirs.

My audience extends and qualifies my techniques.
Basically, they are test-driving my concepts and growing them by shared ownership. You learn a lot about how good a designer you are by putting your creative ego to one side, relinquishing ownership of an idea and allowing others to adapt and improve it. It also keeps you on your toes, because if you share a technique then you have to find another one to explore and hone. Seeing other people learn my techniques and overcome their fears of cutting is a very rewarding experience creatively.

Love of patterns to a cutting fanatic, is like love of maps to a collector. Since childhood I have loved cross-sections and diagrams, periodical tables, family trees, lineage and dominoes. The territory a garment pattern represents, often does not exist before it is drafted/mapped-out, . . . . . .

The three dimensional landscape is created by the two dimensional, . . . by hazarding a guess, with every line, expedition, question mark, puzzle, step, leap of faith, human cannonball flight path,. . . the pattern comes to life beneath the hand, . . . following the curiosity of the minds eye, . . . defining & extending territory, space & & fabric form,. . . bringing the garment to life: in imagination first, hotly pursued by reality. Hazarding guesses, trial & error, learning by mistakes: Being right to be wrong. Escaping the rigidity of childhood geometry: . . . a square block only ever fitting through a square hole, a glove always resembling a hand, the platonic solids dominating conceptions of shape,

. . . thinking only in straight measured lines, thinking hard shapes, solid like wood, metal or stone, . . . instead you need to think more fluidly: fabric not concrete, encourage a more tactile approach to geometry.

It's important to share the inspiration, to be unpossessive, to reveal the magic tricks, to demystify, to be open to collaboration.

You need to pass on the excitement & playfulness of craft / engineering techniques, . . . not the rigid straight jacket of traditions,

. . . the fire, not the ashes/cobwebs.

This is a new time of new design and trading, of creative manufacturing and production, where textiles and fashion combine. If you can't sew then you can't understand textiles, and if you don't understand the capabilities of fabrics then you can't effectively cut or design, or properly understand how garments are manufactured and put together. Students are being trained for internships not industry creation.

It is WRONG at a time of recession and funding cuts, for students to be taught that 'they are being trained to be a designer, not a machinist'. As if the two are discontinuous. Traditional techniques are important to study, there is beauty in rediscovery, but it must not prevent or hinder progression.

You need to encourage people to experiment, as well as to make good or perfect.

. . . to go off the beaten track, to trespass into areas outside their experience or specialism,

. . . to exercise their bodies & minds in the performance of making,

. . . to make themselves the measure,

. . . to measure by eye, by hand, in relation to oneself, to incorporate ones own physical values into the garment pattern,

. . . to escape the bondage of rulers & measures & sizing scales & tools, and instead find new ones.

Don't Specialize.
Fashion becomes separated from textiles, from design promotion & marketing, womenswear dissected from menswear. But they are all joined: fashion & architecture, textiles & mathematics, art & music & economics, mind/body/space.

I would go much further and say that all creative subjects should be seen as being part of the same discipline, and that intellectually the arts, humanities and sciences are not separate or independent from each other. There is a real need for some very creative science, as well as real need for very scientific design. The two are not mutually exclusive, and it is foolish to fund and promote separate strands of thinking that rely on and feed off each other.

You don't have to go to college to be an artist.

What would life be teaching you if formal education wasn't?
Trespass into other subjects & specialisms. Make parallels. Share research findings.
Escape the limitations of formal education and schooled thought.
A new decade & economy unfolds.
Change comes whether you voted for it or not.
Seek out new currencies, new values, new trading routes, new retail avenues, new ways of showing & presenting garments,
. . . of capturing the imagination and making people want to make things THEMSELVES.

People easily forget that things are made by hand, that products are designed & manufactured by people.
. . . manufacture can become remote & unethical when hidden from view, confined to backrooms or overseas sweatshops.
The conventional view of a garment is to approach the problem from the Earth on our knees at the front, rooted to the ground. This approach is to design clothes that are accessible and affordable. The Global Positioning System in my head allows me to draw garments patterns everywhere, turn the landscape into graphics. To design the fabric, I start with a rough sketch, using the landscape as a guide. The sketch is then refined, and the final design is created. The design process is iterative, with feedback from clients and other designers.

We must create a new narrative for fashion. The traditional model of fashion is broken, with designers and manufacturers working in silos. We need to break down these barriers and create a more collaborative approach.

The fashion industry is evolving, with new technologies and techniques becoming more accessible. We must embrace these changes and create a new vision for fashion that is more inclusive and sustainable.

Let us create a new narrative for fashion that is accessible, sustainable, and inclusive.
If you want to own a Julian Roberts garment, then you have to first learn how it is made. All Julian Roberts garments are limited editions made individually for each person, and include a pattern cutting masterclass.

Why?

For me it’s important to tell the story of how a garment is constructed and made, because I see this as an important quality to my design. Not many designers reveal their magic tricks or explain how a garment is made, they are either secretive of their techniques, or unwilling to show how disconnected their manufacture is. But clothes making is a beautiful and intriguing process that deserves attention.

Because I like to cut and sew the garments I design myself, I want people to understand that pattern cutting is not all about cold geometry, computers and machines, but rather it is about a warm human being touching cloth, and exploring ideas using spatial measurements that are human, not abstract.

It is a physical activity, my DNA is all over the garments I make, just as every garment made is touched and caressed by those who manufacture it. It is proof of love.

If a person witnesses a garment being constructed for them then they know the inside of the garment as much as the outside. It becomes a garment that they are much more involved with, and which they will probably care for more. If people care about the process of making clothes more then they respect the maker more, and their clothes last longer, so they consume less and have a greater awareness of quality, and are more willing to pay for it. Or if they can’t afford to, then they can try making their own version, because they have been taught how to. Construction knowledge is a beautiful thing to include with the sale.

Creativity thrives in recession, it’s like a fungus, it’s resistant, it grows in the most unlikely and most unhospitable places, between the cracks, against the grain, contraband, against all odds, without budget, where the sun don’t shine.

If you want to stunt creativity, then throw lots of money at it.

Then you get a lot of idiot fashion designers, architects, artists and musicians hanging out and singing crap songs.

You have to nurture the right environment for creativity to grow, both on display in the spotlight, and in the shadows hidden from view, popular and underground, the idols, and the will to tear them down, or paint them fluoro yellow.

Julian Roberts is pushing 40 pulling 25, 5’8” running 5k then push60 3days a week, 26 homes lived 0 owned, 18 countries worked, fallen in love 6 times heartbreaker 4:1. Family of 6 now 5 heart disease on both sides, no children, 2 college degrees 1 professorship resigned, 1 handful of close friends 000s of acquaintances more female than male, now living 213 miles from where I was born 255 miles from where I always dreamt I’d end up.
Old age does not start with an aging of the body.
It starts with an aging of the minds control of the body.
As it slips, we fear ourselves growing old, and begin to believe that we cannot undertake physical exertion.
We face our mortality, become paranoid, and question our own physiology: meaning, power, manhood, identity, belonging, ambition, survival, status and health.
You reach a point where your body is still strong, agile, supple, eager to move; but your mind has backache, heart problems, drug dependencies and addictions.
The body resists, but the mind overwhelms.
It grips the body tightly in its mindset.

To the last
I'd like to turn the 'glass-half-empty-half-full' idea on its it head for a moment.

Contrary to common belief, it is not pessimistic to think of life as being half-empty.

A glass half-empty anticipates filling, it has potential and space to grow into, it looks upwards towards the brim and believes in the future with great optimism and hope. There is always something new to learn, absorb and experience, until the bitter end.

People who consider life as being already half-full are quite likely to think of themselves as already being complete, and so their dreams and ambitions become half-hearted, they feel in decline, and look to the future more cynically as life continues predictably down well-trodden pathways.

Negative spaces need not be negative.

Life & Everything is so unbelievably mindblowing incredibly incredible and amazing.
I feel obliged to chase after every conceivable possibility & difference & variation, always and forever,
no matter how much shit is thrown at me, or how much debt I shoulder, or how poor I am made,
i will always have this rich awareness:
That the world is HUGE,
that there is so much more empty space & potential for new wonderful structures to grow,
for rivers to be diverted to deserts, tunnels cut through mountains & beneath oceans,
the ability to skim accross the cloud tops at lightning speed, to walk & run through foreign cities & find a route home,
that there is so much industry, so much machinery, such wealth of resources,
such ingenuity, such invention, such beauty & attraction & wide-eyed hunger,
so many more reasons to live & grow & learn & strive & hope & dream & believe & invest,
and chase after all the things that spark imagination, inspire, attract, and make me happy to be alive.

JR.
you are here

SUBTRACTION CUTTING
time is what stops everything from happening at once.
Exactly what are you being educated for?

a Britain shaped hole

THE WORM HOLE
CHAPTER 3:

My professorial lecture
(2006 version)
'Against The Grain: Adventures in Creative Pattern Cutting', a lecture and cutting performance at the University of Hertfordshire in Hatfield UK, June 2006.

"My students aren't used to seeing me onstage looking frightened,
But I do scared & nervous as good as anyone.
Talking & showing stuff to people is pretty easy, but my audience is usually frontstage watching my work while I hide backstage, or they're in a studio or classroom, surrounding me, on my level, nearby & close at hand.
You respond to them, you talk & show them what you need them to see,
you continuously connect with them, check them, watch their eyes, faces & expressions.
An audience like this sits at a distance, watching & observing.
There is not the same emotional connection for me,
not because you're not connected or engaged, but because I am simply not used to standing on stage reading my own words.
It's an unfamiliar place for me to find myself.
So yes I'm scared. I feel awkward, but I am more than happy for you to see my weaknesses, because weakness & fear are human, endearing & real.
They are something to amplify & build on.
Life is a matter of confidence,
And confidence is not something you conjure from nowhere, or a switch you flick on or off.
Confidence grows, with opportunity, with time, with understanding & support from those who believe in you.

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Behind me is a video I've edited showing all my sketchbooks, videowork, collections, catwalk shows, exhibitions & successes.
I'm a practicing fashion designer that has shown 13 collections under my own labels at London & Paris Fashion Weeks, and designed 12 further collections as a consultant designer to companies such as Jasper Conran, Marks&Spencers, Debenhams, and London Denim.
I've taken my work to 10 countries, received the coveted 'New Generation Award' from the British Fashion Council 5 times,
I've sold to stores in Japan, America, Italy, Hong Kong & London, and my fashion & video work has been extensively featured in
the press in newspapers such as The Telegraph, The Times, The International Herald & Tribune, The Evening Standard, Le Monde, The Observer and The Guardian. As well as in magazines such as English & French VOGUE, i-D, The Face, Nylon, Tank, ELLE, SuperBlow, Surface, The Sunday Times Style, ICON and Blueprint.

I've cut garments for Bjork, Naomi Campbell, Kylie Minogue, and at the moment I'm cutting vestments for St. Paul's Cathedral & the Archbishop of Canterbury.

I use a method of garment cutting that I have taught & demonstrated at 10 universities in the UK, and I'm Creative Director of BLOW PR who represent 23 of the newest & most upcoming talents showing at London Fashion Week.

That's the hype & buzz, and I imagine is the reason why the University of Hertfordshire took a risk & gave me the fantastic opportunity of starting it's new BA Fashion course.

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I started with just a desk & a phone, it didn't take me long to find the stationary cupboard & a computer, and in no time at-all I was lost in a whirlwind of post-it notes & to-do notes, imaginary studios & students, floorplans, timetables & project briefs. I made my own pathway, resisted anything that seemed outdated, boring or overly institutionalized, and tried to make something that actually answered the needs of industry, a course that is fun, experimental, fast moving, that wasn't solely focused on creating 'designers', but which was all about skills, about showing the students different approaches & techniques, showing them how wide the industry is, how it crosses over into music, film, art, communication, marketing & business, a course that respects the breadth & diversity of the fashion industry, and which explores the creativity brought to bear in each area.

I've now been here 2 years, we have one of the best looking fashion studios in the country, by September we'll have 120 students of the highest calibre I have seen at any university, and a first class teaching team with excellent skills & industry links.

I am as proud of this place & what we are achieving here than anything I have ever done.

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But I am restless, I find it very hard talking about successes & achievements when there is always so much left to accomplish, so much work left unfinished, and fashion never sits still for long. You have to chase it waving your arms about and not sit around believing your own hype.

My own confidence levels continuously rise & fall.
I have my own design work that I must get off my chest, ideas I need to get out of my system, my goals constantly extend & contract according to budget, time, workload & responsibilities, and though I am a teacher I cannot disengage from practice. I picture my best work lying in front of me rather than behind me on a screen.

When I was first given the title of Professor I didn’t know exactly how to wear it... it didn’t much go with my ripped jeans & tramlined hair. UH certainly took a risk.

I thought the title was rather amusing & that the people I know in industry would think it rather hilarious. But now, I find it so much easier getting tables at restaurants & getting into bars & clubs. I don’t have to carry ID anymore.

In fact I’ve aged terribly since becoming a professor, I’ve started wearing suits & shoes, and it’s made me behave outrageously.

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At school I was never a high achiever.

I had very low concentration, and was very easily distracted by everything going on around me. I only passed a small handful of GCSE’s, not because I didn’t put the effort in or know the answers, but because I was rebellious & found the idea of being assessed both patronizing & limiting.

Fashion caught my eye because it was a way of life.

It was the clothes I wore, the music I was into, the way I cut & coloured my hair, the shoes on my feet, the bars & nightclubs I lived in, the friends I hung out with & fell in love with, in stark contrast to all the people I hated everywhere who were boring & everyday, and who seemed to be in charge.

Fashion was hope, it was a brighter, happier, crazier, more beautiful & proud version of reality, it was unafraid, it didn’t observe the rules, it kept changing continuously, it didn’t care for stopping still, staying in being normal, doing your homework & what you’ve been told.

I was at different times a skinhead, a mod, I hung out with older rockers & teds, I was a bit of a Goth & New Romantic wearing rather too much make-up, and I was a right little raver, punk & rudeboy throughout the 90’s.

Fashion was the one thing to hold my concentration.

It was a brave new world, a lifestyle, not a subject.

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Fashion connects with almost everything now.
In a world increasingly filled with image & product it is in the details, surface, the manner & style of just about everything out there, the sounds we dance to & pump in our ears, the images we connect with on screen, the things we buy & covet, the style we feel part of, comforted by, that turns us on, sparks our interest, and makes us want to make things ourselves. Fashion just doesn’t seem to ever end, and this state of mind set me on fire as a student & when I first started out as a designer.

At university I heard critics, journalists, writers & tutors say that everything has been done, that everything is referential, endlessly connected & repeating, that there is no such thing as the underground, that everything is now absorbed into the mainstream, and quite frankly this just annoyed the hell out of me. People who don’t choose to look, or who are only looking for the similarities, are not likely to appreciate or recognise anything really new. The media tends to obliterate anything outside its focus, but there is so much more to fashion than just a reworking of past styles. Fashion is an activity and a statement.

People NEED to be continuously frightened by newness, freaked out by stuff they don’t recognize & can’t get their tiny heads around, because otherwise they are frightened into submission by the flipside, by small mindedness, hatefulness, jealousy, by the idea that we have reached the dizzy heights of civilization, and don’t need to design new things any more. Fear is a good thing, but only if it shatters your little world to reveal a new dimension otherwise unexplored, a new horizon or escape route, a hope that something better, happier, brighter might lie beyond the hatefulness of the present moment: the here & now & all there is to it.

Fashion gave me the confidence to be myself, but never to accept that i am myself for all time, unable to evolve, change or seek new directions. To my students & those with tools in their hands I say of course there are new things to be discovered, that there will always be more underground than mainstream, that there are shapes that have never before been cut, and ways of exploring the visual arts that are yours to define by practice, and that is why we are here:
If the world was perfect there would be no reason to design new things. You have to seek out the flaws & want to put forward your own alternatives. Push it as far it will go, all the way.

Society goes no further than it is taken, we need test pilots to show everybody that they can dare to venture forward, that confidence can grow, that we can make our mark on the world, that there is money to be made, good times to be had, and that for as long as there are new ways of thinking, doing & making things, there is the possibility of change & progress.

The style of a decade doesn’t kick in on it’s own, it’s the artists, designers & musicians who venture forward new ideas; it’s the people who sit at home and read about it all & who suddenly want a slice of the action, who want to be your fans, want to be involved, want to buy into you; and it’s the media who communicate what’s going down & create focuses, who weave it all into something mythical that’s infectious and exciting.

Hope is a vibration that buzzes in the air, and there is definitely something new going on in Hatfield that people should know about. But let’s not get too lost in this psychedelic moment.

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Confidence is something you CAN give to others. The fashion industry can receive a better quality of graduate if it invests its knowledge & skills within it.

What drove me to teaching & drinking initially was survival, I was a poor suffering artist designer & I needed to eat, pay rent & keep producing my work. I therefore turned on my skills & techniques to bring in extra money as a visiting tutor at Central St. Martin’s & the Royal College of Art in London. I have always been between a student & a teacher, because I always come into universities as a designer.

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One way of saying it, is that I am the new Professor of Fashion at the University of Herfordshire. Another way of saying it, is that I’ve just kidnapped a group of students from their parents, and they’re accompanying me as hostages on the next steps of my fashion career. Teaching them everything I know along the way, showing them new skills, introducing them to new lecturers, my contacts & friends, bouncing ideas off them, taking them to London Fashion Week and letting them see & experience the fashion industry as I have done, as I experience & live it.
I can't keep my own design life separate from my life in education. I have to cross it over, let the students feel what it's like early on, not protect them at university from the harsh realities of the real world. University has to encourage students way beyond their education. To be resourceful, committed, excited, confident, respectful, communicative & opportunistic. Students have to graduate with their eyes open, too many fashion students leave university disorientated by graduation. Thrown out after the catwalk show party is over into an industry that doesn't actually need a load of upstarts thinking they're 'designers'.

What the industry needs is hard workers, people with more than one skill, creative people who are a safe pair of hands, and who appreciate that there is creativity beyond the garment, in the promotional, marketing & business sides of fashion, that you have to make money & balance the bread&butter work with the high art creative statements. Knowing whom you are talking to & who your audience is high on the agenda.

There are thousands & thousands of fashion students graduating every year in the UK, most of which all show at the same time of year, apply for the same jobs, & show their work in the same catwalk show formats. Fashion is highly competitive, success & opportunity is very unlikely to land in your lap, and if it does & you are able to establish a following it won't last long unless you cleverly maintain interest, because the focus of fashion is ever changing & you have to be able to overcome rejection, and when you're last seasons next big thing pull another trick out of your repertoire.

Don't think for a moment that it's the qualification you earn that is the measure of your success. You never stop learning in fashion, and you have to be very resourceful & flexible, to anticipate & respond to it's ever changing landscape. You have to hold onto the enjoyment of making & creating things. Don't take no for an answer, be determined, and be prepared to take on challenges that take you into completely new & unexpected areas. You may even have to try your hand at something really weird like being a Professor.

Designers are often very territorial about their techniques & methods.
But I like to take the myth out of fashion being only for experts, and designers and technicians being geniuses. Anyone can cut an intricate garment if their confidence makes them believe they possess that ability.

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Being an amateur is a powerful position to be in. Nobody taught me to cut the way I do, nobody taught me how to edit a film or programme a website, I invented my cutting techniques by having a go, subverting traditional methods, making terrible mistakes, sticking my neck out & seeing what happens when you try something new & approach the problem from a different perspective.

So when I teach my methods to new students & anyone unfortunate enough to be locked in a lecture theatre with me, they are one step ahead of me. Because they can choose to subvert the rules I teach them, to further twist them around or reconnect them with more traditional methods.

This is my teaching method. I call it ‘Subtraction Cutting’, but its more an approach to design that is relaxed & impulsive. Subtraction Cutting is DESIGNING WITH PATTERNS, rather than creating patterns for designs. I don’t want to be limited by a design prior to cutting.

Pattern cutting is often seen in the fashion industry as being beneath design, that sewing machinists are further down the food chain next to the cleaner, and student interns unpaid slaves who ferry lunch from Macky-D and photocopy things.

In my own practice I cannot work this way or separate the technical from the creative. They are part of the same thing & co-exist.

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When I first learned fashion as a subject I found pattern cutting an obstacle, and my confidence crashed. Pattern Cutting is often taught in a densely mathematical way, with lots of reference to numbers & fractions, sizing scales & rules of thumb:

“Point 0-9 is one fifth of the neck measurement minus 0.2cm, draw in the back neck curve, then join points 1-10 one fifth of the armscye depth minus 0.7cm, then square halfway across the block”
The language of pattern cutting & garment construction can be intensely boring & disengaging, especially when you have a cool lifestyle & you’re going out later & all you really want to do is make the garment that’s in your head, so you can see it on a girl, appreciated & out there.

Pattern cutting to me is a physical activity, and I see garments as fluid, in transit, constantly moving, asymmetrical, and far more expressive than a static floorplan or technical drawing. I work fast in order to soak some adrenaline & emotion into the cloth I’m manipulating, allowing my moods & preferences to shape the resulting garment. I mix & crossover different perspectives when I cut patterns, and try to lose track of the finished outcome in the twists & turns of the patterns geometry. Sometimes I am thinking of a garment from a frontal view, & sometimes I am hovering above it from an aerial view looking down.

I sometimes cut from the inside of the garment outwards, from back to front, or upside down, or my patterns sometimes represent the hollow space within the garment that the body occupies, rather than the positive space that IS the garment. Sometimes I might work in millimetres for accuracy & precision, and sometimes I find myself cutting garments to the dimensions of the room I happen to be working in, measured in arm lengths, strides & spatial measurements that don’t really require any numbers, but which are instead relative to the size of myself. Sometimes I feel tiny, sometimes I feel gigantic, and my patterns extend larger than the physical space I occupy, longer or wider than my studio, taking me outwards in my head beyond the confines of my immediate environment.

My patterns go both with & against the grain of the fabric, they question why a glove should look like a hand, or why a triangular block can only fit into a triangular shaped hole. Fabric is not like wood, concrete or cardboard, and designing in cloth requires a fluid way of thinking that isn’t stiffened or restrained by inflexible rules & traditions.

When you explore new techniques and methods of making, you deal with chance, luck & hope. Sometimes you completely mess up, sometimes the mistakes are really much better than what you were hoping for,
and sometimes you discover something about cloth you didn’t realize was possible.

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I love the traditional methods, and I also love to tear them apart & ignore them. There is no right or wrong way to cut a garment & nobody is in control of fashion. If you change the variables, twist to a new perspective, use freehand lines that aren’t obvious or human in shape, present your work in challenging new formats, then you don’t know 100% what the results will be, and you allow yourself to be shocked, surprised or disappointed at the very last moment, as the garment rises from a 2-dimentional level, upwards into a 3-dimention object & outward into the dimensionless world of fashion image & style.

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Speech over, I will now attempt to demonstrate some of these techniques & cut a dress for you."

SPEECH FOLLOWED BY A LIVE CUTTING DEMONSTRATION.
YOU CANNOT EXHAUST THE POSSIBILITIES....
.... THE POSSIBILITIES EXHAUST YOU!
APPENDIX 1:

Tube preparation for the 'Tunnel Technique'.
how to prepare a ‘Subtraction Tunnel’ ready to make a dress

(aka an idiots guide to making a tube!)

NB: there are many different ways of making a tube and alternative starting points. Use your imagination!
Buy 2 fabrics, each 3 meters long and at least 100 cm wide.

Can be any fabric type, colour, weight or composition.
**making the tubes:**

**FABRIC A**

<table>
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<th>3M</th>
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**FABRIC B**

| 3M |

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**STEP 1)**

Place the two fabrics on top of each other & sew the two long selvedge seams to make a tube:

<p>| |</p>
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NB. give it a generous seam allowance to make sure any pinholes or selvedge markings are put into the seam allowance, and not visible when the tube is turned through to the right side.

Each 3 meters long, widths = at least 100cm wide.

The two fabric lengths do not have to be the same width.
Join the fabrics by sewing down one long selvedge.
You can press the seams open as you go, or at the end... whichever you prefer.
Be generous with seam allowances when sewing the selvedges together.
Then sew the other long selvedge together to form a tube, and press the seams open.
STEP 2)

Before turning the tube through to the right side, you need to sew across one end so that it becomes like a long pillow case or duvet:

NB. If the two fabrics are different widths, then the top & bottom layers will need to be layered flat to sew straight across it:

Top layer wider than bottom layer

Flat layer so that on one side the top layer lies round to the underside

When sewn across and flattened the underside will have a strip of top layer down one side:
Pin across one end of the tube. If the two fabrics are different widths, then the wider of the two will lip around to the other side when laid flat.
sew straight across one end of the tube. Then snip into the two corners and press the seam open.
Reinforce the corners if your fabrics fray easily, and make sure you don't snip the corners too close to the stitch!
STEP 3)

trim the corners

press the seams open
& turn the tube through
to the right side 😊
Once the seams are pressed open, turn the tube inside-out so the seams are all on the inside.
We are now ready to start Subtraction Cutting!
The images, drawings and garments in this book all belong to me and my students.

I would like to thank everyone included for working with me to test drive and transform my Subtraction Cutting techniques in so many interesting directions.

I only wonder what stopped us taking them even further.