

Some thoughts about design

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Concept article only (not finished)

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Having taught blacksmithing both privately and for regional organizations for a number of years, I am drawn to the conclusion that we, as blacksmiths, are very good at teaching the actual blacksmith skills but we are weak in teaching both the elements and principles of good design.

It is a fact that *well designed but badly made* will outsell *well made but badly designed*.

In an effort to start some productive dialogue on the subject, I am producing this article.

It is my hope that other smiths will be motivated to either; refute, offer rebuttals, agree with, either in part or in the whole, offering explanations and examples to support their argument in a written format to be published in the various affiliate magazines or newsletters. In this way I think that we can all move forward with the subject. This is not intended to polarize opinions or people, but to provoke thought.

Let me first offer my own qualifications on the subject. Absolutely none! This is a seat of the pants dialogue containing that information which I can glean from various books.

That stated, let me list a few of the books I am drawing from.

‘Composition in Art’ by Henry Rankin Poore ISBN 0-0486-23358-8

‘The Nature of Design’ by Peg Faimon & John Weigand ISBN 1-58180-478-4

‘A History of the Modern Movement –Art, Architecture, Design #3’ by Kurt Rowland
ISBN 0-442-27175-1

I am supplying photographs taken from some of the coffee table blacksmith books and they will be credited with the photograph during the text.

As a professional smith, whose style is that which is commonly referred to as ‘Traditional’, I used to see the growth of the catalogue component part manufacturers as a problem. I now see it as an advantage. I cannot compete with companies that use those parts if I stay within the same style of work. I am pushed to be original in my design; something that the client cannot get from anywhere else.

If Madame Currie had not discovered radiation, there is a strong chance that someone else would

have, but if Monet had not painted his water lily paintings, no one would have.

I am told that you cannot design by numbers; there is no step-by-step protocol that will lead you to a good design. That may well be the case. My own thoughts are that there are considerations that should be given conscious thought before you move on to something else.

That said, I may as well lay my head on the chopping block and commit those to paper.

Proportions.

The Golden Mean, Golden Section, Divine proportion etc. All refer to a ratio of length by height.

As far back as pre Roman times the ratio of 1:1.618 were found to have ideal proportions. This is roughly the proportions of a 3 x 5 photograph.

A number of studies have been conducted to investigate the human response to the aesthetic of the 'Golden Mean' rectangle.

Fechner, 1876 and Lalo, 1908 studies found that about 35% of people found the proportions to be most pleasing. The next closest being 20% regarding a rectangle very similar in proportions to the 'Golden Mean' [Geometry of Design by K. Elam]

Try it yourself. Draw a line on a piece of paper and then divide the line in two so that you think that the two sides are proportional aesthetically.

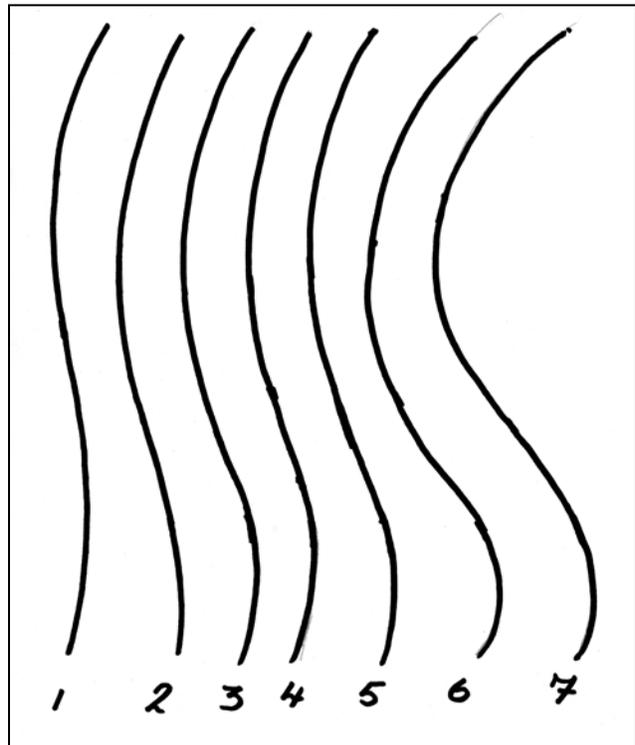
What does that mean to the blacksmith? In real terms, if the design for your gate, panel, sculpture etc. Does not fit in a rectangle of 'Golden Mean' proportions, then you are departing from conventional wisdom. Does this mean that everything that we build should fit into these dimensions? Absolutely not! But, it is worthy of consideration before you move on.

Line. Organic / Geometric

Strength of line, horizontal vs vertical, curvilinear are some of the catch words.

William Hogarth gave a series of seven curves in his 'Analysis of Beauty' circa 1753.

He identified line #4 as being the most aesthetic, The profile of the human back.. These lines can be seen in a lot of Master paintings and sculptures.



For me as a blacksmith it means that when I make a leaf, branch, flower or flowing sculpture with curves, they had better have a 'S' shape to them and not a single curve.

Piet Mondrian in his 1915 'Pier and Ocean' moved away from traditional representation and depicted the scene through horizontal and vertical lines. These were the essential lines of the forms that his subjects made. This style continues to influence the arts, crafts and architecture and can be seen in such places as Frank Lloyd Wright buildings.

I refer to Mondrian when approaching a geometric style commission.

I was unable to secure permission to print Piet Mondrian's painting, but strongly encourage you to go to the web and search for that and others of his work.

I have never spoken to Mr. Lund and therefore do not know what influenced his design, but I enjoy his exploration with vertical and horizontal lines in the gates pictured below. Guiseppe Lund Gates for the Victoria Plaza shown in 'Into the New Iron Age: Modern British Blacksmiths by Amina Chatwin ISBN 0-9525105-0-2

Mondrian also talked of rhythm. Not a new thing in the art world. By repeating or varying the spacing of lines (e.g. a railing) we can give a piece of work rhythm



or beat. A series of straight pickets for a railing, each not quite 4 inches apart etc. Give the railing a monotone rhythm. By changing the spacing (as far as code allows of course!) The rhythm of the railing can be enriched.

Monrian also filled in the spaces between the lines to further emphasize the rhythm. As a blacksmith I can change the bar size in a series of bars to break up a monotone pace.

Lets take this a bit further.

While looking at the figures below and over, think about where your eye is going and whether it is at rest or not. Fig 1; One of something, unless it is a stand-alone art piece, can be a bit boring.

Fig 2; Two of something can cause an irritation to the viewer. The human mind likes to divide things in two. With two elements, the eye is forced to go between both pieces. It can only rest in the negative space between the pieces.

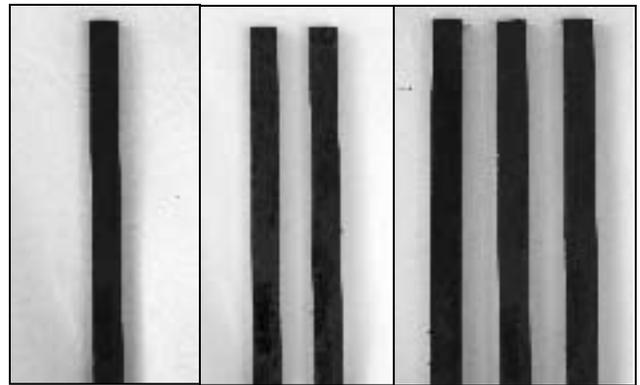


Fig 1

Fig 2

Fig 3

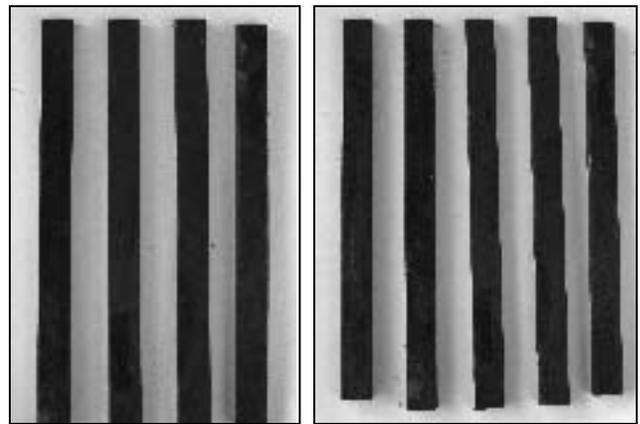


Fig 4

Fig 5

Fig 3; By creating three of something, the eye can easily divide the piece, resting on the middle element and then taking in either the left or right hand side before coming back to the middle.

Fig 4; twice as annoying as two, unless you are trying to get the viewer to appreciate the negative space between elements, as shown in the fluted bar end shown.

Fig 5; again easy to divide and also restful for the eye to view.

So it can be seen that odd numbers of elements can produce a pleasing effect when viewed. But on a long railing job, with many pickets, the eye can become confused, as a long railing is not easy to divide.

Playing with the arrangement and content of say nine pickets gives me a chance to illustrate the point as seen in Figs 6, 7, & 8.

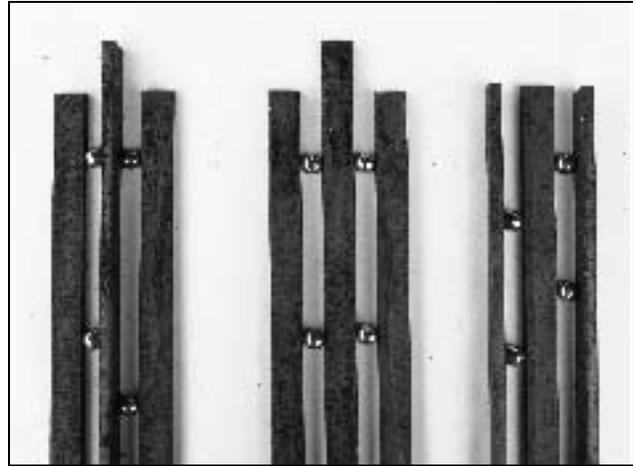


Fig 8

Fig 6 Nine pickets all in a row.

Fig 7 Nine pickets arranged in groups of three

Fig 8 Nine pickets in groups of three with ball elements added and height changes.

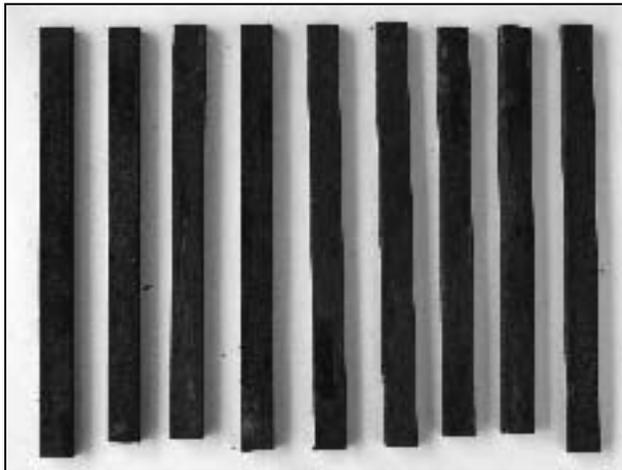


Fig 6

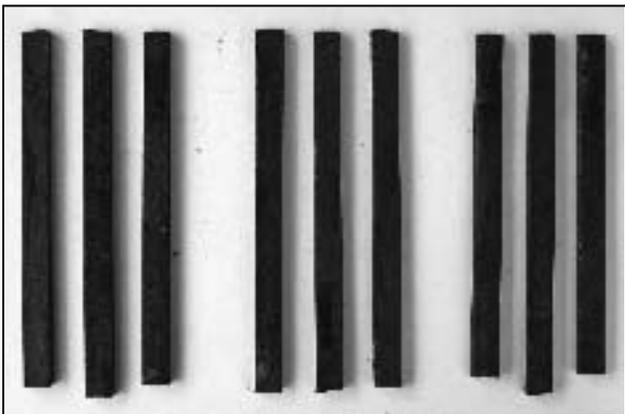
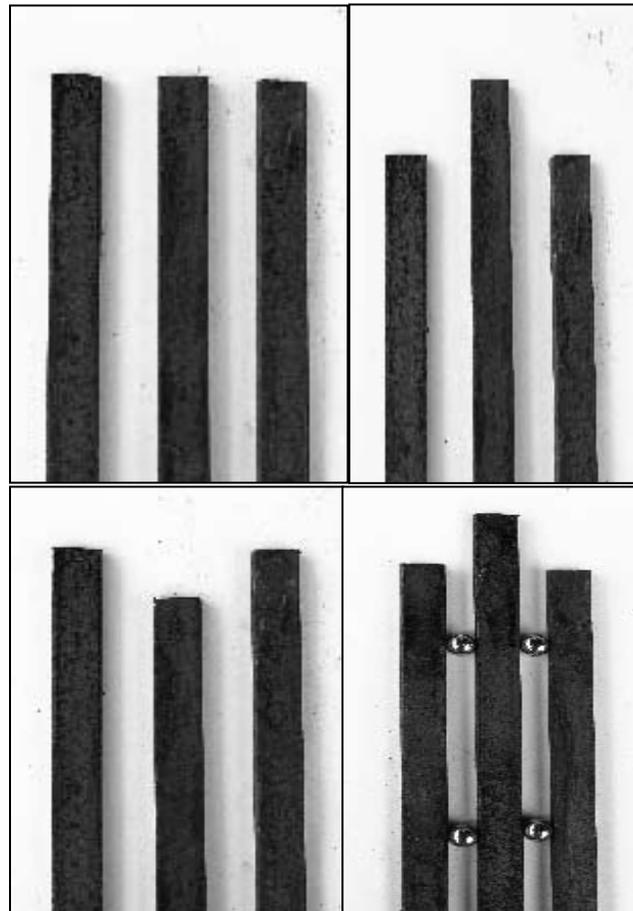
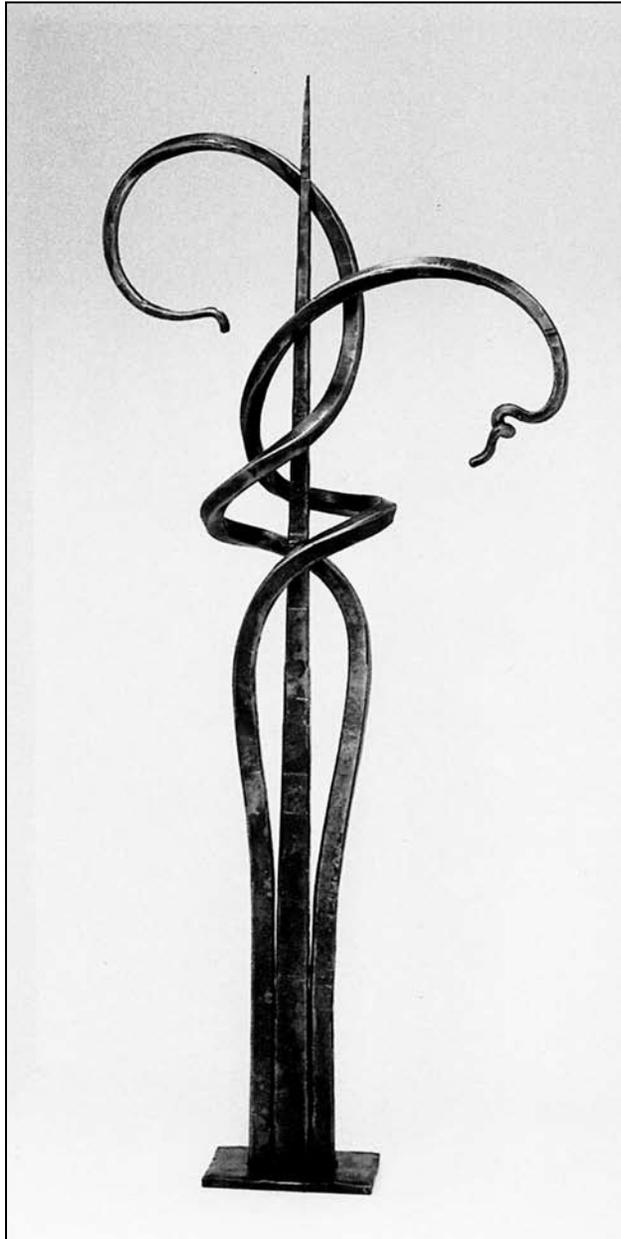


Fig 7

Figures 9, 10, 11 & 12 below



Of them all, I think that three is the most powerful number. It is more than the number after two. It is quickly devisable by the eye, especially if the smith has the luxury to add emphasis on the central piece as Jefferson Mack did in his 'Eastern Addition'. .
See also figures 9, 10, 11 & 12



Jefferson Mack Metals inc 'Eastern Addition'
Photo supplied by artist

Flow

How does the eye move around your sculpture or central/focal element in a railing or gate?
What stops your eye from leaving the piece?

Note the return on the tips of the orbits in Jefferson's sculpture as per Hogarth's lines of beauty. My eye starts with the mass at the bottom, travels up the piece to the juncture, takes either the left or right orbit, is returned to the juncture to take in the other orbit again returned to the juncture before ascending the spire to take in the sculpture as a whole.

Unity

Ask yourself, after putting all your design ideas down on paper before you build, does the project have unity? Does it all belong on the same job? If in the example below of a Paul Margetts panel, the borders contained scrollwork, would it fit? The elements that Paul has used, while being different from each other, fit in with the larger theme. There is unity.

Photo supplied by artist Paul Margetts as seen in 'The Contemporary Blacksmith' by Dona Z. Meilach. ISBN 0-7643-1106-



Taking one or two of the current coffee table books about blacksmithing around to a client at the start of a commission may well lead to the “Top of that one, middle of that and a few of those thrown in” response by the client. Hardly unifying.

Texture.

Lets say that you are in the market for an 8-inch length of 1/2-inch square bar.

I have two for sale. 1. A length cut from a 20 foot bar as delivered by my steel supplier and 2. A length that I made from some 3/4 by 3/8 bar that had to be forged to size.

Which would you buy?

The one that had been through the forge right? Why? Because it has texture. As blacksmiths we might work in metal, but part of what we sell is how the light plays of the piece. Texture creates shade and light.

Balance

If you look at any large building site, you will see a crane at work. Having a heavy weight near the cab, and therefore near the pivotal point, allows the crane to pick up objects at the end of the boom without tipping over. The crane, while it is in ‘physical balance’ also looks balanced visually. If you look at your design, does it have a concentration of work that needs to be brought into balance by having a larger area adjacent that is less saturated in detail? Does your piece have symmetry or is it asymmetrical?

I think that Toby Hickmans abstract fish design (pictured right) is a nice example of balance, texture, curved line, symmatry, movement and includes a contemporary use of traditional scrollwork.. Even though this is an abstract piece, these qualities are still important.



Abstract fish element by Toby Hickman
Photo Aspery

Positive and negative space

Sometimes what's not there can be more powerful than what is there.

Mark Constable has made good use of the negative space to complete the image of a woman in his sculpture shown below.



Mark Constable sculpture
Photo Asperry

Contrast

Do you have contrast in your design? Contrast can be in opposition for example a mirror polished section of an otherwise dark piece, or an change in metals. It can also be transitional, for example your bar could fade slowly from square to octagonal and on to round

Expressive properties

This is definitely getting into the art side of blacksmithing. What mood or feelings are you trying to create? Does your piece have a message or symbolism.

Questions to ask yourself.

- What is the most important shape in your design.?
- What shapes or lines repeat or vary to get rhythm?
- What is the first thing you see in your design?
- This is the area of interest.
- What sort of balance does your design have? Asymmetrical or symmetrical?
- What elements produce that balance. Can you remove a piece and still keep the balance?
- What elements are working together to create harmony or unity?
- What keeps your eye from leaving the design?
- What textures are present. Have you captured all the light you want in the piece.
- Would you want it in your house or workplace?

My last thought is a quote from a friend of mine Adrian Legge FWCB.

“Good technique is important because it supports and frames our art/craft/design like a well mounted picture. I’ll just get off my high horse now...”