

**Squeezing a Spiral into a Square Hole:
Dürer, Bringhurst and Proportion**

Amsterdam-Centrum

WE ARE IN A BAR, in Amsterdam, a *bruin* café, the local tavern. We've brought a book about Albrecht Dürer to discuss, and on the table we choose, someone has left a small stem with twinned leaves on top of some used coasters. It looks like an organic compass. The kind you'd use to draw a perfect circle. Walter, an installation artist, looks at me, and I look at him. We sit down and I flip through the book on Dürer, which has lovely, precise, sepia diagrams on perspective and how to accomplish certain geometrical shapes in drawing.

For a living, I design and print books the old-fashioned way: by hand. Over dinner at Walter's apartment, I'd wondered aloud what the conscious relationship is between planning and chaos, detail and spontaneity – how one exists in the other. Can each be summoned when necessary in the creative process or is the point that it be haphazard? I have always felt an element of chaos in detail and planning in spontaneity, but that feeling itself is instinctual and not at all based in reason, so I have never quite been able to explain it. That was when Walter went straight to his bookshelf, picked out the Dürer book and said, 'Let's have a drink.'

I understand the seduction of a simple solution, of finding virtue in the most abominable flaw. I once confessed to a professional musician that I had somehow made it to the Grade 8 conservatory level in piano

without being able to read a note of music, and that I had quit because that seemed fraudulent. She smiled. ‘What you should have done,’ she said, ‘was take up jazz instead.’ She was being kind, of course, but forgiveness is seductive, and it is most seductive and timeless when the proper channels have been navigated, channels that are just as easily employed in jazz as in typography or graphic design – that is to say, you have to know the rules in order to break them well or, at least, most effectively. Forgiveness is what allows us to break the rules.

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I encounter wistful moments of the if-only-I-had-known-that-then kind when I refer to Robert Bringhurst’s *The Elements of Typographic Style* for my work. It is masterful in its instruction. It gently nudges instead of demands, is suggestive as opposed to pedantic (though it has a pedantic purpose). Typographers fall in love with books, as Bringhurst writes, when ‘structural harmony is not so much enforced as implied.’ He has an uncanny ability to make a suggestion, then to hook you with a sentence like that, and suddenly you find yourself with your hands tied: you know you’re going to do what he says, or at least spend more time considering his suggestion than you’d thought you would. But then, Bringhurst has one thing in his favour: those who pick up this book are mainly the already-obsessed.

I was on a bus back in Canada a couple of weeks ago and as I was paying my fare the driver winked at me in a

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certain way, almost as if in code. I looked at him curiously and he pointed to Bringhurst's book, which was in my other hand. I asked him if he was a printer and he said no, he just loved type and fonts, and over the next two hours of our trundle up the Sunshine Coast, he disclosed his preferences in typefaces – serif over sans serif, long ascenders and descenders over the Venetian 'e' – and called Bringhurst's book 'the definitive book on type and design, period.' You hear this a lot in printing and graphic design circles, but not so much on a bus doing a milk run in coastal B.C. It was a moment to savour, and if Bringhurst's desire for democratic appeal is as honest as he says it is, I think he would have been proud to hear the tribute coming from that man.

The Elements of Typographic Style begins with a visual historical synopsis of how our letters have changed – from the pen-formed terminals of the Renaissance through the Baroque, Neoclassical and Romantic influences to sans-serif realism and rationalist postmodernism. The principles he lays out are concise, well-founded, easy to follow. '1.1.1. Typography exists to honor content' gives way to '1.1.3. There is a style beyond style.' The deeper into the book you go, the more detailed he gets: '5.1.4. Consider even the lowly hyphen.' Bringhurst begins with a rigid structure, then shows you how to move around in it.

You discover in the text a lot of what you already know but sometimes don't want to: that 'Why not?' is rarely enough of a reason to break a rule. Or rather, that it's a tempting justification when you're young and inexperienced, but rarely effective enough that it stands the test

of time. And nowhere is that more clear than in Dürer, contemporary abstract art and Bringham's discussion of the golden section.

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Back at the bar, Walter tells me about the modular ruler he made while he was studying at an art academy – a ruler with a prearranged set of harmonious proportions as opposed to equal units of measurement – and the compass he made whose purpose was solely to create an ellipse. Not a circle, but an ellipse. There's a shine to his eye now, and he starts grabbing coasters, sketching madly on them to illustrate what an elliptical compass is and how it works. I'm thinking that even if I hadn't once taken refuge in the idea of right answers, even if I didn't have this love for equations that I can't explain, even if I was not able to follow his logic, I would love this man for all the passion that's coming from the fingers of his left hand, from what is spilling from his pen onto those coasters.

The idea of the elliptical compass came from Leonardo da Vinci, of course, and it's not as easy to use as it sounds. It has three legs, Walter says – he picks up the twinned leaf and adds his pen to its apex to make a triton – two with points to pivot on and the other to draw with. You have to draw it in steps, switching the points without actually moving the position of the drawing tip, to create the perfect ellipse.

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We talk about *the math* versus *the idea* and he tells me that he thinks you need the math to give you your image, your idea its structure, but that at some point you have to abandon accuracy in numbers and create something abstract from your knowledge. That abstract thing can still be incredibly accurate, he says, but you have to inherently understand the math in order to throw it away and let your instinct take over. The math will still be there, but only subconsciously, and it will make the abstract thing good. The rule is that the math needs to stay in the background. He tells me about another book he has at home, a thick Piet Mondrian catalogue he'd received as a gift once. Mondrian, he says, used the structure of his studio as a test for his work, painting a white square with black stripes around it on a grey wall, et cetera. There was a wood stove in his studio for heat and he hated that thing because it was round – it was the only thing in there that wasn't square or straight-edged. 'Of course, for artists, Mondrian is a very important person to study,' Walter says, 'but I think you should just look at it and forget it.'

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Go to your bookshelf and pull out your favourite book. Not your favourite story or your favourite author, but your favourite book to hold, to sit in a chair with and read, to flip slowly through with the phone unplugged. Open it up – any page will do. What is it that makes it a pleasure to hold and to read? It's probably difficult to say, and part of you senses that knowing might ruin the experience.

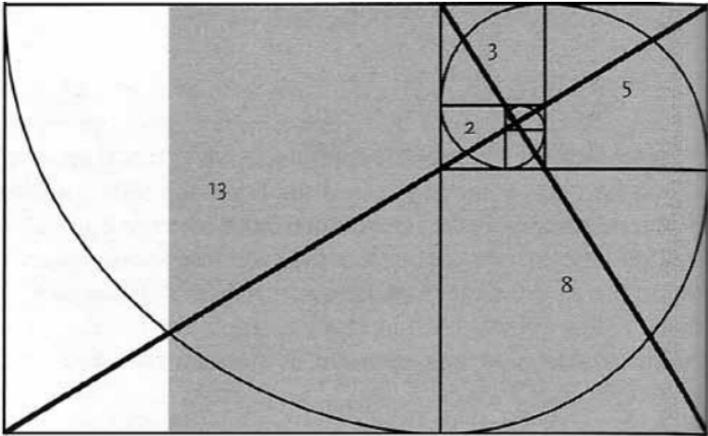
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Most design is convenience-based: making the most of standardized press-sheet sizes, and is therefore bland. But every now and then, we're all drawn to a certain book or page layout, and most of us don't know why. There is a difference between not noticing something because it is standard, unremarkable ('There are (also) those who think that putting chairs and air-conditioners in hell will make it just as good as heaven,' Bringhurst says), and not noticing something because it has been well designed. There's a reason certain books look and feel good to the eye. It almost always has to do with proportion in design. In books, as with most visual things, what makes a page attractive and easy to read, its design invisible, is proportion. And the *pièce de resistance* of proportion is the golden section.

The golden section is an ancient proportion found in nature. It is a symmetrical relation made from asymmetrical parts, and occurs when the ratio of the smaller part to the larger part is the same as the larger part is to the sum [i.e. $a:b = b:(a+b)$]. The ratio (1:1.61803) gives us the value of Φ (phi), an irrational number with qualities of spiralling logarithms and the quantification of unchecked propagation. The easiest way to picture the golden section in nature is to imagine the cross-section of a nautilus shell, growing outward neatly, beautifully, in perfect proportion to the previous layer of spiral. It is this relationship that is ever appealing to us, whether in the form of the human body or in musical scales, or in the relationship of text to a page. Bringhurst's discussion of the golden section is crucial to the understanding of design, and of why certain things work and others don't. In other words, if double-

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square books (i.e., books whose width:length proportion is 1:2) look good to you, it's probably because the relationship of proportion is the same relationship as that found between the notes in a simple octave: a 'primary visual chord' has been created, according to Bringhurst. Clearly, not everything needs to relate back to the exact proportions of the golden section (imagine how bland uniform beauty would be), but what Bringhurst does is nudge us toward an explanation of why certain proportions might be attractive to us, because, he proposes, they are innate and appear so subtly in things around us that we don't even notice them. In a well-designed book or page, he says, 'the text takes precedence over the purity of the design, and the typographic texture of the text takes precedence over the absolute proportions of the individual page.' And, he adds, if you choose to have non-traditional proportions, you should do so with 'a clear and purposeful degree.'



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A good design will mix math and spontaneity, exactness and free-hand proportions, because the eye needs to be directed, but it also needs to have room to wander so it doesn't feel manipulated or stuck. The golden section and proportional relationship is merely a place to begin to understand why. '[A]n organic page looks and feels different from a mechanical page,' says Bringhurst, 'and the shape of the page itself will provoke certain responses and expectations in the reader, independent of whatever text it contains.' In choosing the proportions of type and spacing as well as the proportions of the page, a harmony should be suggestive, not obvious. The relationship of proportion that the designer creates among those elements will more often than not determine whether the reader feels connected to, or turned off by, a book.

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Dürer, it turns out, also used his explorations of proportion and perspective to design typefaces. (The spiral of possibility, it seems, is both imploding and exploding.) Walter talks and I understand and we look around the bar, taking in the tableau of the twin-leafed compass and the detritus of empty, wine-stained glasses and a stack of scribbled coasters that lies before us now, as well as the Dürer book, open to a diagram on how to calculate and account for peripheral vision in the viewer when creating a drawing, and yes, you could call all this coincidence, or even just sequence, but the fashion in which these things line themselves up tonight suggest something deeper, predetermined

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– yes, mathematical, accurate. Most of all, unavoidable. A sort of unchecked propagation.

A few weeks later, we meet at the same *bruin* café. I ask him what he wants to drink and go to the bar to order. When I come back to the table, there, sitting where the stem with twinned leaves had been, is a small, beautiful handmade box. Handmade by him, I know, for me. He tells me to open it. Inside is a new invention. A proportional compass. It has three legs like the elliptical compass, but one of the legs is shorter, attached two-thirds of the way down the inside of another leg.



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If I'm measuring the length of something – he shows me by placing all of the points against the edge of the table, where it's easier to see the relationship between them – the middle leg will fall at exactly the place of the Golden Ratio. It will tell me what the proportional width should be: what the dimensions of the book I'm making should be or where the text block I'm placing on the page should sit. If I'm a good, experienced designer, it will tell me what I had already suspected, and will help to rein things in a bit. With this, everything will look beautiful, and this will tell me those things without any measurement, calculator, ratios, fractions or cross-multiplication or division. That is the most marvellous part. It, like Bringhurst's instruction, is something whose calculations start tight as the core or inner chamber of a nautilus shell, then open the possibility – for both the designer and the appreciator – up into an endless, ever-expanding spiral of experience. But the freedom of that experience, Bringhurst says, 'is denied us if the tradition is concealed or left for dead. Originality is everywhere, but much originality is blocked if the way back to earlier discoveries is cut or overgrown.' I don't *have* to use it in the end, but it is a classic place from which to begin. And the ironic thing is that even though part of the tradition, the mathematics of it, is marvellous – the equations and madness and obsession with the discovery of proportion – eventually, Walter says, the math gets boring, and the compass is what will let me forget the rules while respecting them. The precision has to slip away so that what matters most is the text or image on the page. It is exactly like jazz. It bops and squeals and roils and you play

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or listen and beam but you never, ever ask how it's done. That knowledge – that part of the process – is long past and you are entirely satisfied just being there to put your fingers on it, to listen, or look, or read: to appreciate it.