# Positions through Triangulating

In Tim Ingold's book *Lines: A Brief History*[1], the author takes a systematic approach to investigating the characteristic differences and commonalities of line-making through various methods such as "weaving, observing, singing, storytelling, drawing and writing"[2]. Chapter 5, titled *Drawing Writing and Calligraphy* begins with Ingold breaking down the ways drawing and writing have canonically been distinguished into four areas, which broadly follow themes of script vs. notation, drawing as art, writing as technology, and linearity vs. gesture. He then proceeds to methodically work his way through these terms by defining and contextualising them historically, in relation to existing discourse, and his own argument. He carefully examines each discipline interdependent of one another; meaning the conclusion of each chapter section is not a distinct, separate statement, but a hypothesis that builds into a solid argument — contributing to his overarching theory that drawing, writing and calligraphy are intrinsically linked in their nature. In this chapter, Ingold ultimately scrutinises the power of gesture[3] as it relates to line-making, contending that the movement (or non-movement) that creates a line is integral to its perception as either notation[4] or script[5]. One comparison he makes is between different representations of Chinese script, rendered first by hand using a brush (fig. 1), and then through print (fig. 2). Curiously, he does not include the conception and production of diagrams, or diagrammatic figures, in his text — ultimately characterising the printed reproduction of graphic figures, which he calls "linearization", as "the death of the line", containing "neither life nor movement"[6].

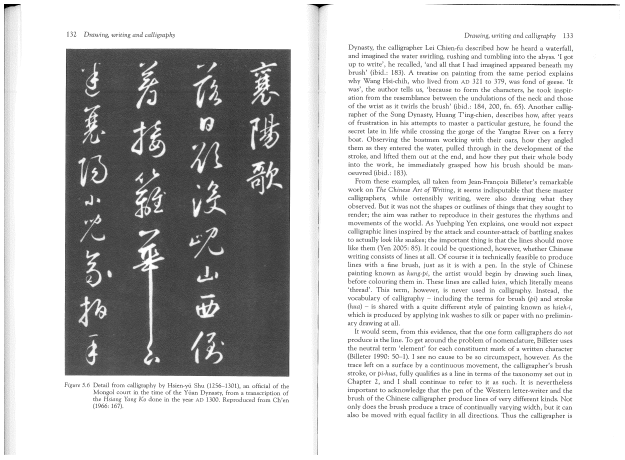

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*Figure 5.6* Detail from calligraphy by Hsien-yü Shu (1256–1301), an official of the Mongol court in the time of the Yüan Dynasty, from a transcription of the Hsiang Yang Ko done in the year AD 1300. Reproduced from Ch'en (1966: 167).

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Dynasty, the calligrapher Lei Chien-fu described how he heard a waterfall, and imagined the water swirling, rushing and tumbling into the abyss. 'I got up to write', he recalled, 'and all that I had imagined appeared beneath my brush' (ibid.: 183). A treatise on painting from the same period explains why Wang Hsi-chih, who lived from AD 321 to 379, was fond of geese. 'It was', the author tells us, 'because to form the characters, he took inspiration from the resemblance between the undulations of the neck and those of the wrist as it twirls the brush' (ibid.: 184, 200, fn. 65). Another calligrapher of the Sung Dynasty, Huang T'ing-chien, describes how, after years of frustration in his attempts to master a particular gesture, he found the secret late in life while crossing the gorge of the Yangtze River on a ferry boat. Observing the boatmen working with their oars, how they angled them as they entered the water, pulled through in the development of the stroke, and lifted them out at the end, and how they put their whole body into the work, he immediately grasped how his brush should be manoeuvred (ibid.: 183).

From these examples, all taken from Jean-François Billeter's remarkable work on *The Chinese Art of Writing*, it seems indisputable that these master calligraphers, while ostensibly writing, were also drawing what they observed. But it was not the shapes or outlines of things that they sought to render; the aim was rather to reproduce in their gestures the rhythms and movements of the world. As Yuehping Yen explains, one would not expect calligraphic lines inspired by the attack and counter-attack of battling snakes to actually look like snakes; the important thing is that the lines should move like them (Yen 2005: 85). It could be questioned, however, whether Chinese writing consists of lines at all. Of course it is technically feasible to produce lines with a fine brush, just as it is with a pen. In the style of Chinese painting known as *hsing-pi*, the artist would begin by drawing such lines, before colouring them in. These lines are called *hsien*, which literally means 'thread'. This term, however, is never used in calligraphy. Instead, the vocabulary of calligraphy – including the terms for brush (*pi*) and stroke (*hua*) – is shared with a quite different style of painting known as *hsieh-i*, which is produced by applying ink washes to silk or paper with no preliminary drawing at all.

It would seem, from this evidence, that the one form calligraphers do not produce is the line. To get around the problem of nomenclature, Billeter uses the neutral term 'element' for each constituent mark of a written character (Billeter 1990: 50–1). I see no cause to be so circumspect, however. As the trace left on a surface by a continuous movement, the calligrapher's brush stroke, or *pi-hua*, fully qualifies as a line in terms of the taxonomy set out in Chapter 2, and I shall continue to refer to it as such. It is nevertheless important to acknowledge that the pen of the Western letter-writer and the brush of the Chinese calligrapher produce lines of very different kinds. Not only does the brush produce a trace of continually varying width, but it can also be moved with equal facility in all directions. Thus the calligrapher is

Figure 1. An example of traditional Chinese brush calligraphy, reproduced from Ingold, T. (2007) *Lines: A Brief History*. Routledge: London. Pp. 132-133

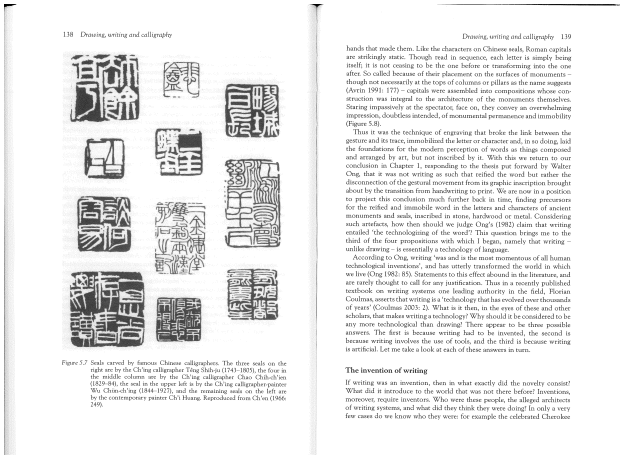

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*Figure 5.7* Seals carved by famous Chinese calligraphers. The three seals on the right are by the Ch'ing calligrapher Tê Shih-p'ei (1741–1805), the four in the middle column are by the Ch'ing calligrapher Chao Chih-ch'ien (1829–84), the seal in the upper left is by the Ch'ing calligrapher-painter Wu Chen-ch'ing (1844–1927), and the remaining seals on the left are by the contemporary painter Ch'i Huang. Reproduced from Ch'en (1966: 249).

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hands that made them. Like the characters on Chinese seals, Roman capitals are strikingly static. Though read in sequence, each letter is simply being itself; it is not ceasing to be the one before or transforming into the one after. So called because of their placement on the surfaces of monuments – though not necessarily at the tops of columns or pillars as the name suggests (Artin 1991: 177) – capitals were assembled into compositions whose construction was integral to the architecture of the monuments themselves. Staring impassively at the spectator, face on, they convey an overwhelming impression, doubtless intended, of monumental permanence and immobility (Figure 5.8).

Thus it was the technique of engraving that broke the link between the gesture and its trace, immobilized the letter or character and, in so doing, laid the foundations for the modern perception of words as things composed and arranged by art, but not inscribed by it. With this we return to our conclusion in Chapter 1, responding to the thesis put forward by Walter Ong, that it was not writing as such that reified the word but rather the disconnection of the gestural movement from its graphic inscription brought about by the transition from handwriting to print. We are now in a position to project this conclusion much further back in time, finding precursors for the reified and immobile word in the letters and characters of ancient monuments and seals, inscribed in stone, hardwood or metal. Considering such artefacts, how then should we judge Ong's (1982) claim that writing entailed 'the technologizing of the word'? This question brings me to the third of the four propositions with which I began, namely that writing – unlike drawing – is essentially a technology of language.

According to Ong, writing 'was and is the most momentous of all human technological inventions', and has utterly transformed the world in which we live (Ong 1982: 85). Statements to this effect abound in the literature, and are rarely thought to call for any justification. Thus in a recently published textbook on writing systems one leading authority in the field, Florian Coulmas, asserts that writing is a 'technology that has evolved over thousands of years' (Coulmas 2003: 2). What is it then, in the eyes of these and other scholars, that makes writing a technology? Why should it be considered to be any more technological than drawing? There appear to be three possible answers. The first is because writing had to be invented, the second is because writing involves the use of tools, and the third is because writing is artificial. Let me take a look at each of these answers in turn.

**The invention of writing**

If writing was an invention, then in what exactly did the novelty consist? What did it introduce to the world that was not there before? Inventions, moreover, require inventors. Who were these people, the alleged architects of writing systems, and what did they think they were doing? In only a very few cases do we know who they were: for example the celebrated Cherokee

Figure 2. An example of carved Chinese seals, reproduced from Ingold, T. (2007) *Lines: A Brief History*. Routledge: London. Pp. 138-139

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[1] Ingold, T. (2007) *Lines: A Brief History*. Routledge: London.

[2] Ingold, ibid, pp. 1

[3] gesture; the physical act of line-making; the movement one makes to draw, paint, inscribe a line into existence

[4] notation; a system of symbolic figures that denote figures, numbers or distinct components in a complex of information.

[5] script; written or drawn information rendered specifically by the hand, that can utilise parts of a writing system.

[6] Ingold, pp. 151.

To situate Ingold's argument around the context of diagrammatic expression, I read Sybille Krämer's text, *Graphism and Flatness: The Line as Mediator between Time and Space, Intuition and Concept*[7] and Susanne Leeb's article *A Line with Variable Direction, which Traces No Contour, and Delimits No Form*[8], which invoke and discuss the variable parts of diagrams and graphic lines; their production, semantic intentions, and potentialities. Krämer and Leeb both find the diagram to be a form of "graphism"[9] that depends on movement to hold meaning. Leeb discusses the points on a diagram to be "pivotal"[10], characterising them as a site of movement; while Krämer proposes that diagrammatic lines are a "corporeality"[11], suggesting that they are intimately connected with the body. This relates back to, but ultimately contends with, Ingold's argument of gesture, which suggests that the movement in the line is limited to its mode and indeed moment of creation — and if mediated by technologies that involve notational elements, cannot be considered a script.

Each of these texts intersect with my own enquiry slightly differently. Currently, I am conducting an open interrogation of the language used for diagrammatic instruction, aimed at exploring the limits and nuances of diagramming and how that generates meaning. I am doing this through material experiments that are self-referential and subvert the intended uses of different diagrams for applied arts and craft, as a way of cataloguing and repurposing them. I started by indexing a collection of diagrams from instructional craft books, classifying them by colour, shape and form, and their relation to text and numbers. I then began subverting their use through animation, stitch work (fig. 3) and weaving (fig. 4).

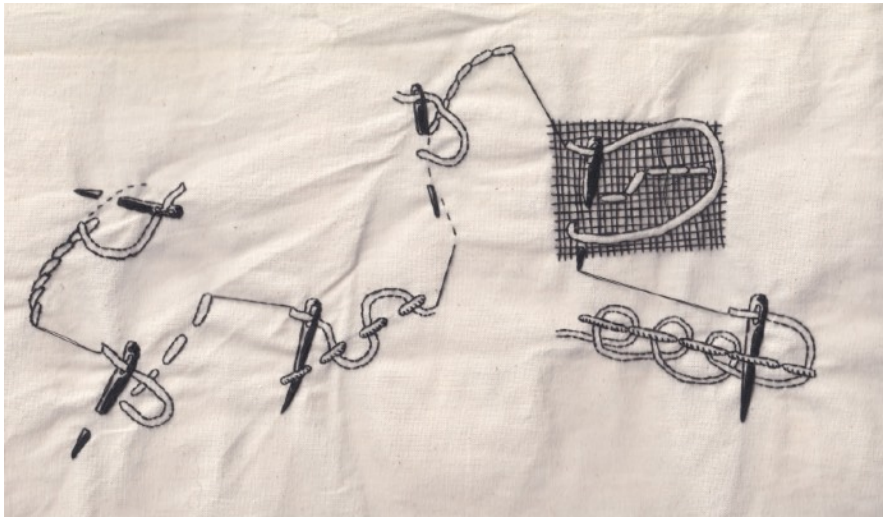

Figure 3. A stitched rendition of stitching diagrams. Cotton on calico. Image courtesy of author.

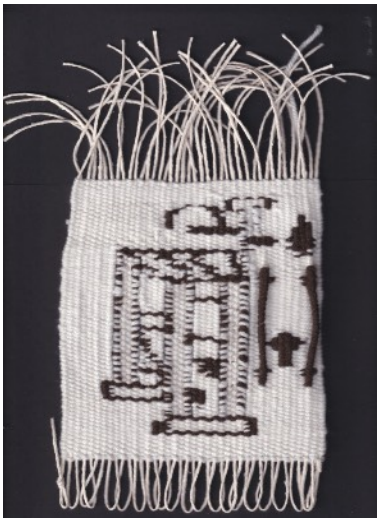

Figure 4. A woven diagram of a drawboy machine, rendered in wool. Image courtesy of the author.

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[7] Krämer, S. (2015) 'Graphism and Flatness: The Line as Mediator between Time and Space, Intuition and Concept', in M. Faietti and G. Wolf (eds) *The Power of Line,* Hirma, pp. 10–17.

[8] Leeb, S. (2015) 'A Line with Variable Direction, which Traces No Contour, and Delimits No Form', in N. Gansterer (ed) *Drawing a Hypothesis: Figures of Thought,* Springer Verlag, pp. 29–42.

[9] graphism; the use of line or symbols to express thought and meaning. Krämer, pp. 11.

[10] Leeb, pp. 36.

[11] Krämer, pp. 11.

So far, my investigation has posited that diagrams are static, merely representing a movement or physical thing — key frames that collect and represent the most important part of an actionable skill, process or object. Unlike the above authors, I have not considered the gesture as integral to the diagram itself, but more to the potential outputs they generate. Ingold focuses on the process of learning through gesture, which results in a line, where I am looking at the gestures learned through line, which result in a separate output. His emphasis on the distinction between gesture and technology sits in contrast to my studio experiments which seek to combine the motion of line-making with the technology that makes the line.

In these test pieces (see figs. 3 and 4), I was working towards creating an integrated dialogue between the drawing [diagram], maker and the output — which I had defined as the three integral elements to the variable functionality of a diagram. To demonstrate this, I followed the figures in a book of 100 embroidery stitches[12] to create stitched representations of the diagrams themselves (fig. 5). My second experiment used a figure of a draw-boy apparatus[13] (fig. 6), which I wove using plain weave on a tapestry loom.

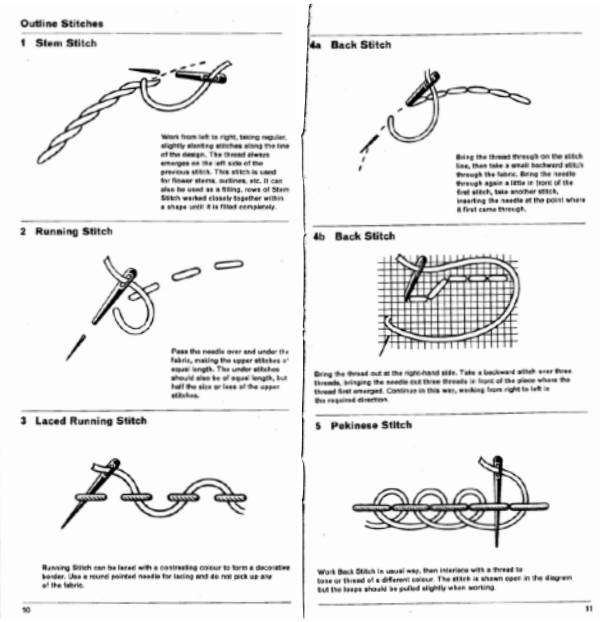


Figure 5. Diagrams of stitches, reproduced from Coats, J&P. (1967) *100 Embroidery Stitches.* Coats Sewing Group: Glasgow.

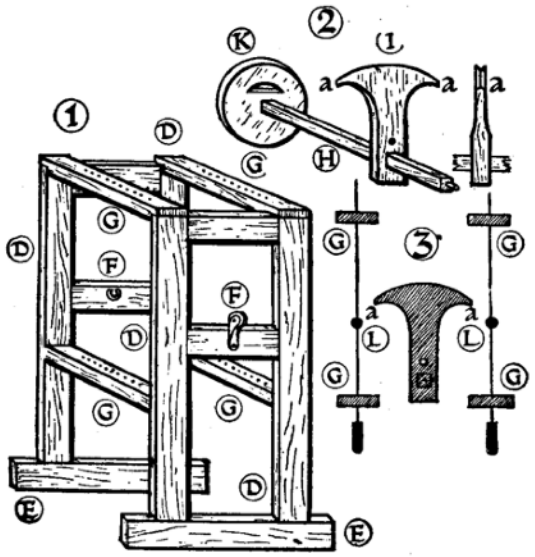


Figure 6. A diagram of a Drawboy Machine, reproduced from Hooper, L. (1979) *Hand-Loom Weaving.* Bloomsbury Publishing: London.

Though simple, these tests demonstrated the possibility for multiple interpretations of diagrams, as well as providing a physical representation of the diagrammatic gesture that Ingold contests. This is particularly evident when looking at the reverse of my stitched sampler and the tapestry weaving, which trace the actual movements made in the process of making the work (see figs. 7 and 8).

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[12] Coats, J&P. (1967) *100 Embroidery Stitches.* Coats Sewing Group: Glasgow.

[13] Hooper, L. (1979) *Hand-Loom Weaving.* Bloomsbury Publishing: London.

Figure 8. The reverse of figure 3. Image courtesy of the author.

Figure 7. The reverse of figure 4. Image courtesy of the author.

Where, then, do my experiments situate diagrammatic instruction in relation to Ingold's argument? He writes, "Writing is still drawing. But it is the special case of drawing in which what is drawn comprises the elements of a notation"[14]. If we extrapolate his thinking to the context of my enquiry — where my experiments merge both gesture and output — the act of making something after a diagram becomes a form of writing, and the output created is part of a script. The consideration of these physical diagrams as scripts correlates to Leeb's argument and Krämer's suggestion that a diagram is not objective or quantifiable, but constantly shifting; "an instrument of metamorphosis"[15].

Similarly, I see my enquiry shifting from here, and reconsider my position on the diagram as a static key frame in a sequence of gestures. I see that Ingold's argument has emphasised the straddling position of *gesture* in relation to diagramming; *gesture* (making something) ⟹ *diagram* (recording the act of making) ⟹ *gesture* (replicating the skill according to the diagram). The diagram acts as an auxiliary language — a record, even — of the physical acts of creation. This relates to Krämer's supposition that "line configurations have cognitive power so far as they embody abstract concepts and make them accessible"[16], raising questions around the importance of these translations of practice in maintaining communities of practitioners. Why have diagrams been important for the practice of applied of arts and crafts? How is the slippy (pivotal, ever-changing) nature of diagrammatic language embodied in the outputs it yields? Do diagrams ensnare singular meanings or interpretations of processes, or provide an archive of gestures to manipulate and develop?

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[14] Ingold, pp. 122.
[15] Krämer, pp. 12
[16] Krämer, ibid, pp. 13.