

The Life of Lines

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 **Routledge**
Taylor & Francis Group
LONDON AND NEW YORK

5 Of knots and joints

Carpentry is otherwise known as joinery, the carpenter as a joiner. But what is a join, and what does it mean to join things? Here I want to argue that the dominant metaphors of block, chain and container, which I introduced earlier, have led to a fateful equation of joining with *articulation*. They lead us to imagine a world comprised of rigid elements (or blocks) that are linked externally (or *enchained*) side-to-side or end-to-end. Whatever is not hard or solid is confined to (or *contained* within) the interior of these elements. Interiorities cannot therefore mix or mingle. They can only fuse in the constitution of compound elements, in which any trace of joining immediately disappears. This was exactly Durkheim's argument concerning the constitution of society. Individuals may articulate with one another through external contact, as they do in the marketplace, but society is seamless.

Surely, however, articulation is not the only way to join things. Another way is to tie them together in some kind of knot. Here, the things to be joined must be linear and flexible. They meet not face-to-face, on the outside, but in the very interiority of the knot. And they are joined neither end-to-end nor side-by-side but in the middle. Knots are always in the midst of things, while their ends are on the loose, rooting for other lines to tangle with. Tying and articulation, then, look like two ways of joining that rest on precisely opposite principles. And the carpenter? What principle does he adopt? You would think, at first glance, that he must opt for articulation. After all, whoever heard of knotting beams or planks of wood? Of course it is possible to sew together adjacent planks by means of flexible withies or roots, as is attested by some prehistoric techniques of boatbuilding.¹ But you cannot knot one plank with another. This, surely, is where the craft of carpentry differs from that of basketry. The basket-maker works with flexible saplings rather than solid wood, and weaves the strands in and out so that they always overshoot their points of contact. But the carpenter, for example in building a frame for a house, joins his solid timbers end-to-end, end-to-side or side-to-side. With the basket, the countervailing tensile and compressive forces of bent withies lend rigidity to the whole structure; with the house-frame, the principal pressure-points are in the joints themselves.

Given these evident differences between carpentry and basketry, how could one possibly argue that the carpenter's joint is a species of knot? Yet this was the argument proposed by Gottfried Semper in his treatise of 1851, *The Four Elements of Architecture*. We have already seen how Semper viewed carpentry and textiles as complementary practices within the overall field of the tectonic arts, with the knot as the most elementary operation common to both. Fascinated by etymology, Semper found support for his ideas in the affinity of the German words for knot (*Knoten*) and joint (*Naht*), both of which appear to share the Indo-European root *noc* – whence *nexus* and *necessity*.² What is at stake here – as Semper was well aware – is more than just a question of technique. Rather, it touches on the more fundamental question of what it means to make things. The carpenter and the weaver are equally driven by the imperative of making, and for both, there can be no making without joining. However, the necessity of the knot is not a brittle one that allows for freedom only in the spaces left between, but a supple necessity that admits to movement as both its condition and its consequence. That is to say, it is not the necessity of predetermination, whose antonym is chance, but a necessity born out of commitment and attention to materials and to the ways they want to go. Its antonym is negligence.

In this regard, the carpenter's joint is absolutely *not* an articulation. For in it, as in the knot, materials offer themselves to one another on the inside, yet without losing their identities in the composite whole. In cutting a mortise and tenon, for example, one piece is made ready to receive the other, such that their subsequent interpenetration, hidden away in the interiority of the joint, is an enduring condition. Indeed, Semper's argument regarding the joint, in the field of material relations, runs parallel to what Mauss had to say about the gift, in the field of social relations. Just as the hand I offer you in greeting remains fully mine, so the tenon cut in one piece, and that is offered to the mortise cut in the other, remains fully with the first even as it is received into the second. So it is too with the constituent lines of the knot. As with the latter, we might say that the pieces of timber are joined, but not joined *up* (Figure 5.1). For the adverb 'up' connotes a finality that is belied by the ongoing life of the thing. It is no more joined up than used up. On the contrary, it carries on. And as it carries on, its joints or knots establish relations not of articulation but of *sympathy*. Like lines of polyphonic music, whose harmony lies in their alternating tension and resolution, the parts possess an inner feel for one another and are not simply linked by connections of exteriority.

It is precisely because these parts are bound in sympathy – through interstitial differentiation rather than external accretion – that I refrain from using the term 'assemblage' for the whole comprised of them. This whole is a correspondence, not an assemblage, the elements of which are joined not 'up' but 'with'. Whereas the agglutinative accretions of the assemblage are 'and ... and ... and', the differential sympathies of the correspondence are 'with ... with ... with'. As the design theorist Lars Spuybroek explains,



Figure 5.1 Joining timber.
This photo, taken in British Columbia, Canada, illustrates one way of joining beams at the corner in traditional log-cabin construction. © Alex Fairweather / Alamy.

sympathy is a 'living with' rather than a 'looking at', a form of feeling-knowing that operates in the interstices of things, in their interiority. It is, Spuybroek writes, 'what things feel when they shape each other'.³ In both carpentry and textiles, the form of a thing does not stand over it or lie behind it but emerges from this mutual shaping, within a gathering of forces, both tensile and frictional, established through the engagement of the practitioner with materials that have their own inclinations and vitality. Having established that both knot-tying and joining are instances not of articulation but of sympathetic union, respectively bringing together flexible and rigid lines, the stage is set for recognising all sorts of intermediate cases in which knotting and joining, and rigid and flexible lines, may be combined. Think of the ship's masts and its rigging, the goal-posts and the net of a football pitch, the fisherman's rod and line, the archer's bow and bowstring, the weaver's loom and warp-threads or, more gruesomely, the hangman's gallows and noose. Perhaps the most outstanding example, however, is the human body, a complex of knots and joints par excellence, whose members must be in sympathy if the person is to remain alive and well.

I have already observed that the heart is a knot. The bones, however, meet at the joints. The parallel between well-joined wood and stone in the construction of temples and well-joined limbs in the body of the warrior – the one conferring resistance against violent weather, the other resistance against the violence of enemies – was a recurrent theme in Homeric poetry. The same verb *ararisko*, 'to join', commonly used for both, was one of a host of words based on the Indo-European root **ar*, from which are also derived not only the warrior's 'arms' and the builder's or maker's 'arts' (in Latin, *armus* and *ars*), but also 'article' and, of course, 'articulate'. As we have seen, the suite of words derived from that for the joiner's art, *tekton* – including the Latin *texere*, 'to weave' – originally converged upon much the same meaning.⁴ But for the poets and philosophers of classical Greece and Rome, the articulation of joints in the well-tempered body had yet to take on the anatomical significance familiar to us today. It was associated more with ideals of beauty, poise and fortitude. Only much later did the joint come to mark a point of attachment and separation between discrete body parts, whether that body be of the animal on a butcher's slab or of the human on a dissecting table. And only in this anatomical apprehension, as a corpse, did the body come to figure as a totality assembled from components. This is an apprehension, however, that is divorced from life. For the living being, the joint – which, like the rest of the skeleton, was never assembled but has rather grown with the person to whom it belongs – is not so much an exterior connection of rigid elements as an interior condition of correspondent movement, bonded on the inside by means of a linear mesh of ligaments (Figure 5.2).

Before leaving this matter of the join, it is necessary to add one further remark, which concerns its opposite: separation. An articulated structure, comprised of enchainned elements, can readily be taken apart, as happens, for example, with wagons in a railway shunting yard. As the wagons are uncoupled, so the freight train is *disarticulated*. Likewise, bones that have been assembled in the forensic laboratory can subsequently be disassembled. But from all I have argued up to now, it should be clear that the separation of elements that have been joined in sympathy cannot be understood in these terms. For it is not just a matter of cutting an external connection: something has to give from the inside. This bears on the question of memory.

Comparing the chain and the knot, I have already noted that the chain has no memory. When you release the tension in a chain and let it fall to the ground, it comes to rest in a disordered heap. But if you untie a knotted rope, however much you try to straighten it, the rope will retain kinks and bends and will want, given the chance, to curl up into similar conformations as before. The memory is suffused into the very material of the rope, in the torsions and flexions of its constituent fibres. So it is, too, with timbers that have been joined. They may be pulled apart, and used in other structures, but will nevertheless always retain a memory of their former association. When we say that, in separating, something has to give from the inside, we



Figure 5.2 Bones and ligaments.

In this drawing, from his *Beiträge zur bildnerischen Formlehre* (1921/2), the painter Paul Klee shows how the bones of a joint are bonded with ligaments. Thanks to their embedding in the linear matrix, the blob-like osseous elements can form a flexible and sympathetic union. Zentrum Paul Klee, Bern, reproduced by permission.

mean that it is necessary to forget. An articulated structure, since it remembers nothing, has nothing to forget. But the knot remembers everything, and has everything to forget. Untying the knot, therefore, is not a disarticulation. It does not break things into pieces. It is rather a *casting off*, whence lines that once were bound together go their different ways. Thus it is with siblings in the family: having grown up together, their leaving home is not a disassembly but a dispersal, a shaking out of those lines of interstitial differentiation otherwise known as relations of kinship. And in the knot of the navel, every one of us retains a memory of that originary moment when we first came into the world, only to be cast off with a cut.

Notes

- 1 Apart from willow and roots or bast, some ancient boats were sewn with yew. See McGrail (1987: 133–5).
- 2 Here I have drawn on the authoritative review of Semper's work by Kenneth Frampton (1995: 86).
- 3 See Spuybroek (2011: 9).
- 4 On this parallel, see Giannisi (2012), and for its etymological correlates, see Nagy (1996).

6 Wall

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