
Textile Diagrams

Florian Pumhösl's Abstraction as Method

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»When I organize the properties of a work, I accumulate existing techniques, material properties, pictorial motifs, and [...] interchange them. So a picture that sets out to describe an abstract space constituted by a fabric metaphor for reproduction cannot itself be a fabric.« (Florian Pumhösl)¹

»[T]extiles encompass more than actual fabrics.« (Gottfried Semper)²

»[A]lready before ascribing to the diagram any content or reference whatsoever, there is a crucial process of abstraction [...] taking place [...]. Thus one and the same diagram token may be read as a type in widely differing ways according to the rules of interpretation used. A line may be interpreted in one diagram as a borderline, in another as a line of connection between two points, in yet another as a transport of some object between two locations.« (Frederik Stjernfelt)³

1. A Textile Complex

For Viennese artist Florian Pumhösl »abstraction is a method«, not a category.⁴ Or rather, if abstraction is the defining category of modernism, the objective is to make it *work* again, to reproduce modernism's problems and limits and exploit relationships among its parts.⁵ We might follow a general definition provided by

¹ Florian Pumhösl: Spatial Sequence. A Conversation between Yilmaz Dziewior and Florian Pumhösl, in: Florian Pumhösl: Räumliche Sequenz. Arbeiten in Ausstellungen / Spatial Sequence. Works in Exhibitions, Bregenz 2012, p. 44.

² Gottfried Semper: Style in the Technical and Tectonic Arts; or, Practical Aesthetics, trans. Harry Francis Mallgrave and Michael Robinson, Santa Monica, CA 2004, p. 110.

³ Frederik Stjernfelt: Diagrammatology. An Investigation on the Borderlines of Phenomenology, Ontology, and Semiotics, Dordrecht 2007, p. 96

⁴ Florian Pumhösl: Works and Exhibitions. An Artist Talk by Florian Pumhösl, at University of British Columbia, Vancouver, 6 November 2014.

⁵ An exploit in the realm of software and networks, but also generally, can be defined as »a resonant flaw designed to resist, threaten, and ultimately desert the dominant political diagram.« See Alexander R. Galloway and Eugene Thacker: The Exploit. A Theory of Networks, Minneapolis 2007, p. 21.



Fig. 1: Florian Pumhösl, *Räumliche Sequenz*. Installation view Kunsthaus Bregenz, Bregenz 2012/2013.

American philosopher Charles Sanders Peirce: »the word *abstraction* is wanted as the designation of an even far more important procedure, whereby a transitive element of thought is made substantive, as in the grammatical change of an adjective into an abstract noun. This may be called the chief engine of mathematical thought.«⁶ The point is not to abstract (in the parochial sense) some material entity or worldly object, or create ideas in some metaphysical space, but to locate connective threads – to research stitches that may have been hidden at first glance.

Consider, for example, one of Pumhösl's exhibitions, held in 2012 at the *Kunsthaus Bregenz*. It should be noted first of all that this work followed what he identifies as the temporary exhibition format, a »historical and aesthetic field of negotiation, a democratically negotiated structure«; he focuses on this form's potential.⁷

⁶ Charles Sanders Peirce: *Collected Papers of Charles Sanders Peirce*. Electronic Edition. Volume 2. *Elements of Logic*, § 364, under: <http://pm.nlx.com/xtf/view?docId=peirce/peirce.02.xml;chunk.id=div.peirce.cp2.10000;toc.depth=1;toc.id=div.peirce.cp2.10000;brand=default> (13 November 2014).

⁷ Pumhösl: *Spatial Sequence*. A Conversation (as note 1), p. 41.

So the work for the show was not a singular installation but rather a distributed, »space-related« form: fifteen paintings, grouped in threes, were installed as series on each of the building's three floors. There was also, as is typical for the artist, an apparent economy of means, a lack of supposed information. The sequence of pictures, titled *Cliché 1–15*, revealed only delicate skeleton-like forms, linear motifs using a method of stamping oil paint on a creamy surface of ceramic plaster. But if abstract, these were not so much founded on principles of subtraction or metaphysical universality as they set out, in the first instance, to reproduce a particular engine of mathematical thought – one which was begun sometime in 1922 when the Hungarian constructivist László Moholy-Nagy called up a local ceramic plate manufacturer, gave them instructions for a composition of colors according to x-y coordinates on graph paper, and asked the company to reproduce the design at different scales, thrice over.

Now refer to an image printed toward the front of the Bregenz catalog – a black-and-white photograph from a 1924 exhibition at *Der Sturm* gallery (what would be one of its last, as the gallery closed later that year).⁸

Included among the photo's depicted pictures is the famous series of »telephone pictures« by Moholy-Nagy, *Constructions in Enamel*: the set of three, identically composed, rectangular objects that were spaced on the wall in intervals proportional to their scale. Pumhösl would later reveal in an interview that his trios began by borrowing the spatial method provided by *Em1*, *Em2*, *Em3*, so that the »distances between the pictures in the [Bregenz] trios consist in all possible variations and/or doublings of the distance of the panels to each other as defined by their various heights.«⁹

But this photograph is not simply a record of a particular spatial form – the way the *Constructions in Enamel* occupied a wall in a Berlin gallery. It also suggests what was immediately present at that moment, but nevertheless tangential to its frame – namely that this show included not just ninety-five works of modern art but also, perhaps more remarkably, forty textiles from ancient Peru, which were framed and installed by Nell Roslund, wife of the *Sturm* gallerist Herwarth Walden. During Pumhösl's research, he fixated on this data set, printed in another historical document: the exhibition's checklist found in a short brochure.¹⁰

⁸ For a concise description of this work and installation, see Brigid Doherty: László Moholy-Nagy. *Constructions in Enamel*, 1923, in: Barry Bergdoll and Leah Dickerman (eds.): *Bauhaus 1919–1933. Workshops for Modernity*, New York 2009, p. 130–33. A Google search will find images of the »Telephone Pictures« and this *Der Sturm* exhibition online, for example, under: http://greg.org/archive/2012/06/20/rethinking_telephony_from_moholy-nagy_or_rtfm.html (8 January 2015).

⁹ Pumhösl: *Spatial Sequence. A Conversation* (as note 1), p. 41.

¹⁰ Florian Pumhösl: In conversation with the author, Vancouver, 6 November 2014.

When speaking of his interest in the already »well-mapped regions of modern art«, Pumhösl differentiates his particular method: »what is decisive for me is the moment when things cease to be entirely coherent.«¹¹ In his method of abstraction, what counts are the connections and disconnections that emerge out of material research: like when Moholy-Nagy's telephone pictures came into association, during the month of February 1924, with a series of bird and cat motifs repeated in patterns throughout intricately woven textile artifacts – objects that were at some point plundered by Europeans from sites throughout the Andes. In this foundational modernist exhibition, we infer, one context was lost, another gained and things ceased to be coherent. Pumhösl realigns such a moment of »desynchronization.«¹²

The absence of the textiles from the aforementioned photograph – and, it seems, every historical discussion of Moholy-Nagy's pictures thereafter – supports what Pumhösl calls the »textile complex« of modernism, a certain psychic map that has been pushed deep into historical folds of modernism's unconscious.¹³ We might say, then, that for his Bregenz show he sought to diagram the space between Moholy-Nagy's paintings, to create an orthogonal map of its connection to textiles, now lost, and then bind it to a new architectural space. Or, we might say more simply that Pumhösl »conduct[ed] experiments upon these images in the imagination, and observ[ed] the result so as to discover unnoticed and hidden relations among the parts.«¹⁴ Pumhösl, in other words, treated this photograph of an installation diagrammatically. The absence of forty ancient Peruvian weavings was reproduced as a diagram, a set of lines and spatial relations now transposed onto the architecture of the *Kunsthhaus* in Bregenz, punctured by vertically aligned pictures, grouped in threes. The inception of modernism is joined to the legacy of colonialism.

This helps explain why, though Pumhösl's textile complex may be »constituted by a fabric metaphor for reproduction«, it cannot itself be a fabric. It can only be, as the photograph testifies, that which is absent.

¹¹ Pumhösl: Spatial Sequence. A Conversation (as note 1), p. 43.

¹² Florian Pumhösl: Works and Exhibitions. An Artist Talk (as note 4).

¹³ Florian Pumhösl: In conversation with the author, Vancouver, 6 November 2014.

¹⁴ Charles Sanders Peirce, cited in: Stjernfelt: Diagrammatology (as note 3), p. 91.

2. Moving Pictures of Thought

Like metaphors, diagrams can be defined generally as devices of figuration.¹⁵ Also like metaphors, according to Peirce, they occupy a subset of the semiotic category of the icon. Icons do not just include visual images; rather they include various kinds of signs that bear a similarity (though not an identity) to their object. Whereas an indexical sign »thrusts its Object into the Field of Interpretation by brute force« and symbols do so by »habit«, what Peirce identifies as *hypoicons* (images, diagrams, and metaphors) require a (slower) process of mental deduction, whereby the similarity to its object can be grasped. They *work* to show a set of relationship among internal parts.

To be clear, not all similarity in the realm of icons is simplistic or trivial. Most icons function as signs through what Peirce calls a »non-trivial« or operational similarity: »For a great distinguishing property of the icon is that by the direct observation of it other truths concerning its object can be discovered [...] which suffice to determine its *construction*.«¹⁶ To recognize the resemblance between an image of a maple tree and a maple tree in the world, I would need to deduce that, yes, the tree's crown in the picture is approximately two-thirds of the tree's height and that the leaves similarly bear multiple, symmetric lobes (shaped just so). I grasp an analogy between perusing a codex and occupying architecture because the poet details a resemblance of manner and activity: while »the tectonics of the book frame chance and its twisting trajectories«, her procedure of reading »inhabit[s] its joinery« and its »commodious« folds.¹⁷ A patent diagram is understood because the relationships among the various parts in the machine and those delineated in the corresponding patent document bear an operational consistency. Like any icon, then, a diagram requires an element of observation and is arrived at and interpreted through deduction, whereby the construction of the icon's or diagram's

¹⁵ Concerning the philology of the word »figure« as a rhetorical device, see Erich Auerbach: *Figura* (1938), in: James I. Porter (Hg.): *Time, history, and literature. Selected essays of Erich Auerbach*, Princeton 2014, pp. 65–113. On the relationship between verbal and visual iconicity, or metaphors and diagrams, see Jeanne Fahnestock: *Rhetorical Figures in Science*. New York/Oxford 1999, p. 42.

¹⁶ Peirce, cited in: Stjernfelt: *Diagrammatology* (as note 3), p. 90; emphasis added. Stjernfelt explains further: »It does not matter whether sign and object for a first (or second) glance seems or are experienced as similar; the decisive test for its iconicity rests in whether it is possible to manipulate the sign so that new information as to its object appears. This definition is non-trivial because it avoids the circularity threat in most definitions of similarity. At the same time, it connects the concept of icon intimately to that of deduction«, p. 90.

¹⁷ Lisa Robertson: *Nilling. Prose Essays on Noise, Pornography, The Codex, Melancholy, Lucretius, Folds, Cities and Related Aporias*, Toronto 2012, p. 13 f.

parts »shall present a complete analogy with those of the parts of the object of reasoning.«¹⁸

But more specifically, if »the diagram is a skeleton-like sketch of its object in terms of [rational] relations between its parts«, it is also »apt to reason with, to experiment on.«¹⁹ As a formal machine, according to Frederik Stjernfelt's summarization of Peirce's thought on this sign, it is a »vehicle for mental experiment and manipulation.«²⁰ This is why relations must be internally consistent: rivers depicted on a map, whether conceived through blue ink or through lines that denote the possibility of movement or transportation, must always follow a consistent code (whereas the image-icon might not). So »a line may be interpreted in one diagram as a borderline, in another as a line of connection between two points, in yet another as a transport of some object between two locations«, but in each case they are an engine of thought.

The diagram might be a *hypoicon*, a subset, but as Stjernfelt argues, »the diagram concept plays a central, not to say *the* central, role in the mature Peirce's semiotics.«²¹ And so Stjernfelt's book is established on the premise of fleshing out the ways diagrammatic reasoning might pervade the entire system of thought and representation. Indeed, the »mapping of diagrammatic structure between conceptual spaces plays a central role in metaphor in general.«²² But also, he instructively notes:

»As soon as an icon is contemplated as a whole consisting of interrelated parts whose relations are subject to experimental change, we are operating on a diagram. Thus, the inclusion of algebra, syntax, and the like in the icon category takes place thanks to their diagrammatic properties – but the same goes for your average landscape painting as soon as you stop considering its simple qualities, colors, forms etc. and move on to consider the relations between any of these parts and aspects. As soon as you judge, for instance, fore-, middle-, and background and estimate the distance between objects depicted in the pictorial scene, or as soon as you imagine yourself wandering along the path into the landscape, you are operating on the icon – but doing so in this way is possible only by treating it as a diagram.«²³

This connection is important because there is a basic conception of *continuity* in Peirce's later philosophy; it underpins his understanding of the diagram as concept or method of observation and deduction. »The continuum is a primitive concept

¹⁸ Stjernfelt: *Diagrammatology* (as note 3), p. 91.

¹⁹ *Ibid.*, p. 90.

²⁰ *Ibid.*, p. 99.

²¹ *Ibid.*, p. 89.

²² *Ibid.*, p. 93.

²³ *Ibid.*, p. 101.

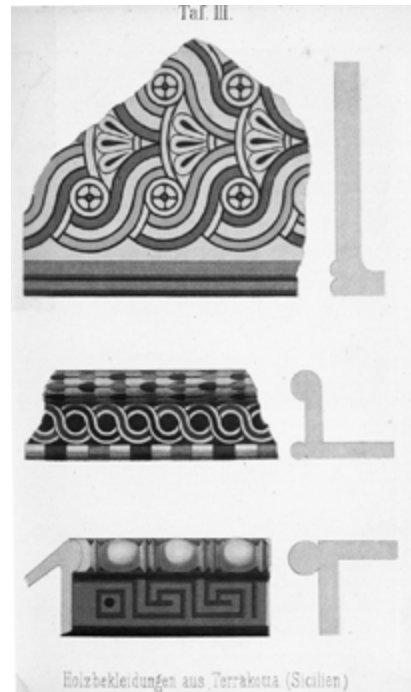
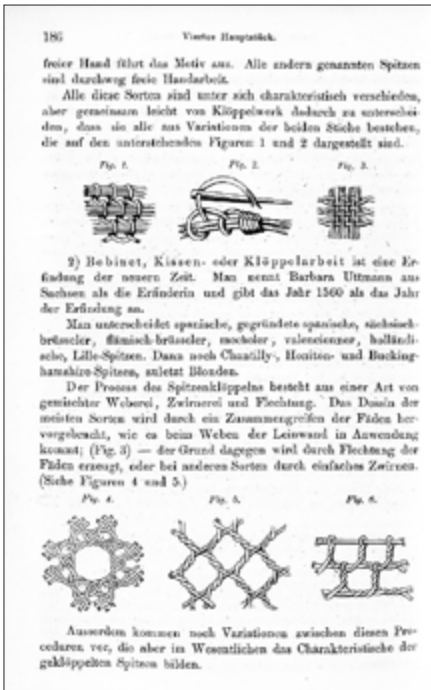


Fig. 2

of its own, and if anything, it is rather composed by infinitesimal line segments (the problem with this idea, of course, being that such segments are harder to identify or locate than points).²⁴ This means that diagrams – or icons for that matter – are not static; they figure elements that are always (as they are deduced) »moving« in relationship to one another. Diagrams become in this process, Stjernfelt summarizes, »moving pictures of thought«, a process that never really ends. Abstraction is a method of the imagination.

Diagrams are at once concrete and abstract; they are pictures of material, yet nevertheless invisible, processes: physics, not metaphysics.²⁵ Consider another set of examples: the textile diagrams that are seen throughout Gottfried Semper's *Style* in the form of empirical illustrations – of knots, plaits, networks, latticework, or

²⁴ Ibid., p. 5.

²⁵ For more on the condition of abstraction as concrete in the field of physics (in particular the writings and thought of Albert Einstein) as it relates to modernist abstraction in the early part of the twentieth century, see Peter Galison: *Concrete Abstraction*, in: Leah Dickerman and Matthew Affron (eds.): *Inventing Abstraction 1910–1925. How a Radical Idea Changed Modern Art*, New York 2012, p. 350–357.

ornamental bands (as strings) – but are also found, a bit more metaphorically, operating as the text's conceptual binding and cover – the universal principle of continuity that joins the discrete elements of his architectural universe together. They help to explain a summary of Semper's textile concept found in a short text from 1859, *Prospectus. Style in the Technical and Tectonic Arts or Practical Aesthetics*, an outline of the famous treatise he would later publish over two volumes.

Toward the beginning of his schema of Textile Art, we find a subheading »I. General Functional-Formal« where the architect prudently notes: »Style dependent on use. The only two objectives of any textile production are: a. the binding / b. the cover. Their formal meaning is universally valid. Contrasts within this meaning (everything enclosing, enveloping, covering appears as a unity, as a collective; everything binding as jointed, as a plurality).«²⁶ A cover, we deduce, is a functional-formal manifestation of the objective to shield and protect; whether as clothing or as architectural cladding, planimetric forms conceal internal differences. But binding, whether instantiated as interlaced threads in a fabric or as stylistic bands seen throughout a building, yield structures and surfaces that are articulated (*jointed*); divisions are manifested from within. The »original and authoritative meaning« of the textile, in other words, is both unified and split.²⁷ »The unity to which the string refers«, he would later write, »contrasts at the same time with the plurality through which the authority and homogeneity of the subject are emphasized and enhanced.«²⁸

In these notes, Semper points to two of the basic principles underlying his architectural method – the *Bekleidungsprinzip*, on the one hand; and tectonics, or jointed construction, on the other. The specific forms that textiles generate to meet their functional objectives become the »primordial art (*Urkunst*) as it were«, from which architecture borrows its types. But if textile represents some kind of origin, we might further extrapolate, it is because it represents *both the method and the idea* of binding and covering. Thus textiles are specific – a particular and consistent set of observable processes – but they are also universally applicable as functional types. Semper delineates the material plurality of the »technical arts« (including ceramics and tectonics) only to, almost as quickly, unify them under a textual blanket as general ideas. As Semper notes in the first volume of *Style*: »Even language borrows its terms for describing such concepts from textiles.«²⁹

²⁶ Gottfried Semper: *Prospectus. Style in the Technical and Tectonic Arts or Practical Aesthetics* (1859), in: Gottfried Semper: *The Four Elements of Architecture and Other Writings*, trans. Harry Francis Mallgrave and Wolfgang Herrmann, Cambridge, MA 1989, p. 175.

²⁷ *Ibid.*, p. 174.

²⁸ Semper: *Style* (as note 2), p. 113.

²⁹ *Ibid.*

If for Peirce a diagram is »in every case a sign or an ordered Collection or Plural, or, more accurately, of the ordered Plurality or Multitude«,³⁰ then for Semper the textile is the quintessential diagram. The textile, in other words, is the »primordial« *diagram* of thought and praxis. Thus the concepts or techniques of the seam (*die Naht*), the cover (*die Decke*), and clothing (*die Bekleidung*) help him map the relations between textiles and other arts, help him locate (metaphoric) connections. They bind the arts together, so to speak. Somewhat like Pumphösl's textile metaphor, which cannot itself be a fabric, Semper's textile encompasses more than actual fabrics. As a figure, it works to diagram »the constituent parts of form that are not form itself but rather the idea, the force, the material, and the means – in other words, the basic preconditions of form.«³¹

3. Animated Maps

Consider now a film projection by Pumphösl. Titled *Animated Map*, and first shown in an exhibition of the same name in 2005 at the Neue Kunst Halle St. Gallen, the project began with a photograph of an Austro-Hungarian soldier and his wife: a pathetic, crumpled fellow, his uniform is noticeably wrinkled – the pockets on the jacket folding like ears – this feature made even more noticeable by the relative stillness of his wife's dress. This photograph from 1914, found by Pumphösl in an archive, was used as the invitation card to the show.

For the film, Pumphösl asked a fashion designer to reconstruct the soldier's uniform as a dressmaker's pattern, turning it from cloth or rather photographic matter (but in any case *Stoff*) into a diagram. The artist then traced the blueprint by hand, using an analog method of animation, so that the cutting and sewing of this uniform was mapped onto celluloid and then projected over four minutes and twenty seconds. Over the course of the film, different lengths of red and white lines that reference the abstract symbols of clothing patterns gradually mark spatial dimensions on a black ground. Beginning as points that then develop into vectors, these cuts intersect other lines or connect back to starting points to give the outline of a specific shape: sleeves, a jacket breast, and trousers. But some of the lines are not cuts, per se; rather they are something like ghosts of the stitching for an inseam pocket, or the indication of the lengthwise grain – the line that tells the seamstress how to align the fabric's selvage or grain (the directionality of the warp) with the pattern's top and bottom. So what we have in this diagram are different *classes* of lines. While some suggest connections, others suggest divisions. While some sug-

³⁰ Stjernfelt: *Diagrammatology* (as note 3), p. 95.

³¹ Semper: *Style* (as note 2), p. 72.

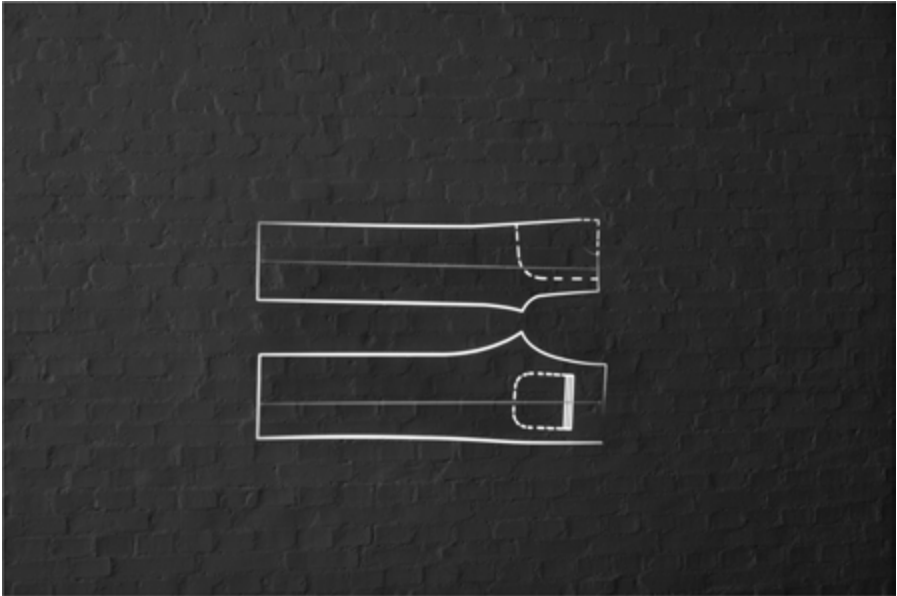


Fig. 3: Florian Pumhösl: *Animated Map*, 2005. 16mm film, colour, silent, 4' 20", loop.

gest a particular shape, others are indicators to the reader of a protocol (a code of practice). Some lines frame a distinct field, a figurative presence (a piece of fabric or a body distinguished from a ground), while others indicate a procedure that is otherwise unhinged from form. As the lines appear and then disappear beneath the surface of the black ground, the filmic frame (or the material break and suture between each animated cut and stitch) becomes visible. Lines and frames are both immaterial and material, spectral and real. So in this reconstructed, animated pattern, lines at once diagram an abstract set of procedures (like cutting, sewing, and aligning) and delineate a set of figural shapes, disjointed body parts.

This film-as-diagram appears merely to *trace* the pattern, «skipping back over» an outline through »blind repetition«. ³² But if we think of this film as connected to a number of other nodes in an exhibition with the same title, *Animated Map*, then what we begin to do is to imagine the semantic tenor of these lines within the film. What was found in Pumhösl's 2005 exhibition was a diagram, a map of connections that had taken on an excess of metaphors.

³² On the difference between tracing and mapping in Gilles Deleuze's theory of the diagram, see Jakub Zdebik: *Deleuze and the Diagram. Aesthetic Threads in Visual Organization*, London 2012, p. 110.

Such metaphorical stitches or edges are found in the book by the same name, which details the archival stories that subtend the exhibition's various nodes – the different objects that were installed in the space alongside the film. Although they move page-by-page according to a chronology (beginning with a description of an object from 900–1532 and ending with one of the exhibition itself in 2006), the order of these accounts is unimportant, so concludes the book's final sentence: »The constituent parts of the exhibition were fragments of a newly constructed referential system. Regardless of its context and its authorship, its size and historical character, each object was intended to be of equal significance to the others.«³³ So we have, among various objects, Plate 1: a piece of pre-Columbian Chancay lace placed on black – an especially evocative assemblage that occupied an earlier exhibition but which became in *Animated Map* just one object among others. Its connection to a wider field was what mattered.

Before moving on, and to further understand the links established by the book and exhibition, now consider another kind of diagram, called a graph. In graph theory, a branch of mathematics and computer science used to model pairwise relations between objects, the edges (or lines) that link nodes are paramount, indeed vital, to the functioning of its diagrams. Although typically in graph theory agency is attributed to the nodes, while the edges are deemed to be passive, without the edge we would have points, places in some abstract space, but no connections between them.³⁴ Edges imply relations that are either directed, as in a vector, or undirected, wherein they merely bind points, but in any event they give definition to the *relationships* between nodes, also called vertices.

³³ Florian Pumhösl: *Animated Map*, St. Gallen 2007, p. 20.

³⁴ In *The Exploit* (as note 5), p. 33, Galloway and Thacker problematize graph theory for attributing agency to nodes but not edges. They write: »Although graph theory provides the mathematical and technical underpinning of many technological networks (and the tools for analyzing networks), the assumptions of graph theory are equally instructive for what they omit. First is the question of agency. The division between nodes and edges implies that while nodes refer to objects, locations, or space, the definition of edges refers to actions effected by nodes. While agency is attributed to the active nodes, the carrying out of actions is attributed to the passive edges (the effect of the causality implied in the nodes).« The second problem is that graph theory has a »diachronic blindness.« They further write: »While a graph may evoke qualities of transformation or movement in, for example, the use of directed edges, it is an approach that focuses on fixed »snapshot modeling of networked ecologies and their simulation using mathematical models and systems. This is, we suggest, a fundamentally synchronic approach.« It should be noted, then, that while I am offering graph theory as a model for thinking about the connections between objects in Pumhösl's exhibition, I am focusing on the possibilities offered by the edge as an agent that might, in spite of graph theory, allow for diachronic analysis, as well.

In a lattice grid – a specific kind of graph – the edges outline a set of squares, determining this graph's root identity, its model of rectilinearity. And so the grid's ontic status, as Sol Lewitt suggests, can be permuted, but the terms of its form are essentially finite. The grid abides by a system of general equivalence – a set of terms and connections that work by a model of recursivity. As one frame fits in another, the grid is a model of expansion and containment simultaneously. In distributed network, however, no two edges are necessarily equal in length (no two relations are necessarily equivalent), and edges need not continue, through vertices, to link with other edges. Most importantly, these edges need not imply a border, the line or part where an object or area begins or ends, but only the connection. So it is possible to diagram a field that has no inside and outside, no center and no frame. Extending in multiple directions, the edges of this visual diagram fail to delineate a discrete spatial plane. They don't enframe a distinct shape – say a square or polygon. Rather, in this method of mapping the connections or movement of information, people, money, or whatever, the edges bind but do not contain.

So, with *Animated Map*, we have, on the one hand, a framed yet moving picture – a literal textile diagram, a sewing pattern made over into film. On the other, we have a metaphorical textile diagram – the *Animated Map* exhibition as a network of connections between nodes. Beside the film, other nodes included the building in which the exhibition was held, a warehouse engineered by Robert Maillart that once stored the linen produced by the textile industry in St. Gallen. Another was the particular arrangement of temporary walls, modeled after a Bauhaus traveling exhibition designed and installed by Hannes Meyer and Alfred Arndt. In this way, the difference between the space and the objects within them is as moot as the order of their connections. The exhibition architecture, the space itself, is marked as both a node and an edge within a network.

And then of course there is the reconstructed pattern of the uniform of an infantryman from 1914, a diagram that is paralleled by another kind of diagram, a drawing that »looks like a sheet of instructions for making a painting« by the Belgian modern artist Georges Vantongerloo. Each contains a mixture of lines, symbols, and descriptive text – both inciting a procedure at some later stage (the first mapping how to cut and sew the uniform, the latter how to frame out a picture).

And then there was another film, from 1915, by the English cinematographer F. Percy Smith: *Fight for the Dardanelles*, an »animated map« of the kind that was screened in WWI during newsreel bulletins and that diagrammed the maneuvers of troops and battleships through animated sequences. According to the description provided in Pumphösl's book, these animated maps »show how fully mechanized military forces and abstract visual imagery interacted at an early point in the twentieth century.« Thus, Piet Mondrian would describe in an essay on neoplastic painting »a film he saw at the beginning of the war in which the earth was

shown as a plane and the enemy troops as small squares. The Dutch artist noted how the diagrammatic representation of natural things [...] gives us a more general notion of things«, a »purer relation« projected on a flat surface.

With this node in mind, and the edge that connects Percy's military film to Pumphösl's, as well the edge that connects both to modernist abstraction, we might deduce that the lines in the uniform pattern have another meaning. The avant-garde artist crosses paths with the soldier on the front (that is, on the vanguard). One kind of diagram becomes another, though not necessarily isomorphic, form. The pattern's lines imply borders between nations, but also the transversal march of soldiers, at once cutting, stitching, and reframing the frontier. They also imply a body or scraps of a uniform, exploded after being hit with a bomb. Land and body are mangled in the moment of their abstraction, their framing and stitching via the map, these diagrams. The abstract lines of the sewing pattern (or of Mondrian's cited paintings), in addition to the connections that stitch one object to the next in the exhibition and book, are now charged conduits, carriers of metaphors. Hence, the diagram as an »abstracted function [...] pass[es] from one system to the next [...] two incongruous systems [connect in spite of the differences between] their respective operative fields.«³⁵ The inception of modernism is joined to the inception of WWI.

On the matter of connections, it is worth mentioning that still other stitches could be made, back to Pumphösl's larger oeuvre. Putting aside the expectation that a single author is the device that binds his or her disparate projects, it is nevertheless useful to acknowledge the fact that Pumphösl turns repeatedly to the use of diagrams in his historical study of the field of modernism (a larger project that he calls »modernology«). In lieu of an abstraction that only references its material support, as André Rottmann has put it in an essay on the artist, »the viewer repeatedly encounters in the exhibition space frugal markings, schemata, vectors, and lines which do not offer any correlation to their own gestalt but proffer ›historical traces of the unknown called the body‹ in a state of disintegration.«³⁶ With Pumphösl's method, modernism is mapped as a network whose edges sometimes join different nodes, and sometimes fail to join – they conclude in a (violent, or productive) misunderstanding.

Back to Pumphösl's solo exhibition, *Spatial Sequence*, at *Kunsthaus Bregenz*, his series of diagrams titled *Cliché 1–15*. This temporary exhibition made a diagram of the environment, the building's concrete walls, and the spacing between pictures. But there were diagrams found *within* the pictures, as well. Images in the first

³⁵ Zdebik: Deleuze and the Diagram (as note 32), p. 4 f.

³⁶ André Rottmann: History and Abstraction in the Work of Florian Pumphösl, in: Pumphösl: *Spatial Sequence* (as note 1), p. 68.

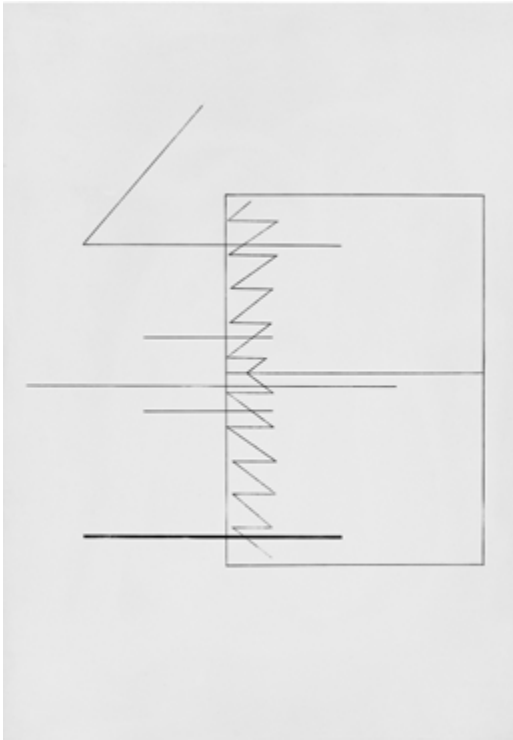


Fig. 4: Florian Pumhösl: *Cliché 10*, 2012. 3 parts, stamping with oil paint on ceramic plaster: 36,6 x 25,6 x 2 cm. 73,4 x 51,4 x 2 cm. 146,5 x 102,5 x 2 cm. Part 2 shown here.

series (*Cliché 1–5*) »describe possible states of projection«, a »quasi-architectural pictorial space«, while the series of pictures on the second floor (*Cliché 6–10*) were not just self-referential – other »associations mingle here.« As Yilmaz Dziewior notes, this series introduced a »narrative element«, which could be »read as an instrument or tool.« Indeed, the particular figures or icons that emerged in these sets called up diagrams of instruments – specifically, it turns out, backstrap looms of the kind used by weavers in the Andes – so not a human figure but the relationship between that body and a certain technique, a particular apparatus. In these pictures were found *diagrams of diagrams* of techniques, abstractions of abstractions.

Interested in the historical fact that ancient Peruvian textiles were exhibited alongside Moholy-Nagy's enamel *Em* paintings at *Der Sturm* gallery, or were a consistent source of formal and technical inspiration for artists like Paul Klee and Anni Albers, Pumhösl researched and exploited »the space that

[this] opened up vis-à-vis the abstract picture.«³⁷ It is why, as he would later clarify, when he »organize[s] the properties of a work, [he] accumulate[s] existing techniques, material properties, pictorial motifs, and [...] interchange[s] them. So a picture that sets out to describe an abstract space constituted by a fabric metaphor for reproduction cannot itself be a fabric [...].«³⁸ He can »merely [...] paraphrase it.« Thus, the textile in this network is neither materially present nor imaged as such, but rather becomes the mode or functioning through which connections are made: it is an abstract diagram, a historical net made of edges and knots. Once again: the inception of modernism is joined to the legacy of colonialism.

³⁷ Pumhösl: *Spatial Sequence. A Conversation* (as note 1), p. 43.

³⁸ *Ibid.*, p. 44.

4. A Self-Devouring Tangle

In discussing the structural significance of the seam, Semper writes of the way a certain technique that joins two surfaces or »pieces of a homogeneous nature« was originally used in clothing and coverings, but that, »through an ancient association of ideas and even through linguistic usages it later became »the universal symbol for the primeval chain of things [...]. It is that which joins and commands everything.«³⁹ But if links and joints are important, he reveals, they do not necessarily imply order. Sometimes the »sacred knot is chaos itself: a complex, elaborate, self-devouring tangle of serpents from which arise all »structurally active« ornamental forms« – symbols like the »bow knot, the labyrinth, or any other related form and name for this sign« that »spread rapidly [...] at the beginning and ending of every great social order.«⁴⁰

Referring to *Animated Map* in a conference presentation in 2012, Pumhösl made a joke that the sewing pattern diagram did not simply map a »textile complex«, but perhaps also invoked a »textile military complex« – the particularly lugubrious matrix of war, industry, and uniforms that generated the soldier's body or that occupied an other's land. And these could be found in another set of diagrams he had recently discovered: a uniform book for the German army in 1894. These images detail the specific colors and shapes that ornament the uniform types for various soldiers, but they reminded Pumhösl of instructions for abstract, serial artworks – say, those of Josef Albers or Blinky Palermo – and also the isotypes designed by Otto Neurath. What the book articulated for Pumhösl was a sense that this »textile complex« stood at the origins of early abstraction (sometime in the nineteenth century). So abstraction, formed out of instructions or maps, was not so much »abstract«, but rather inscribed with the material conditions that generated the world *as abstract* – a concrete disciplinary



Fig. 5

³⁹ Semper: *Style* (as note 2), p. 153 ff.

⁴⁰ *Ibid.*, p. 155 f.

matrix wherein diagrams for war machines and uniforms were homologous with artistic modernism. In the textile (military) complex, Pumhösl locates an abstraction that purports to do one thing but does another. So he reworks it, makes connections, abandons some parts and remaps others, and then allows that integration to fall apart.

Thus, if the concept of the diagram, and in particular the dual role of edges in graph theory, is productive, it is that it helps to grasp the status of the textile in Semper's writing, or the line in Pumhösl's work. Each case, I would argue, is an attempt to map the textile complex or unconscious of modernism (either in advance, with Semper, or posthumously, with Pumhösl). We find, in both textile diagrams, a kind of abstraction as a method, founded on a slippery continuum, whereby an economy of ordering and rejoining becomes a plurality, a self-devouring tangle.

Picture credits:

Fig. 1, 3, 4: Courtesy Galerie Buchholz, Berlin/Cologne.

Fig. 2: Gottfried Semper: *Der Stil in den technischen und tektonischen Künsten, oder praktische Aesthetik. Ein Handbuch für Techniker, Künstler und Kunstfreunde. Erster Band. Textile Kunst.* Frankfurt, 1860, p. 186 and plate III.

Fig. 5: *ibid.*, p. 83.