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"Capturing the Gothic Line"
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Panels
Essay
Ornament and Crime?! 

‘Beauty is that reasoned harmony of a body ornamented or additional, embellishment.’

‘Adornment is, in fact, a very remarkable cultural-historical phenomenon! It belongs to the privileges of man and is perhaps the oldest which he made use. No animal adorns itself. […] It is the first and most significant step towards art; in adornment and its inherent order is contained the complete code of formal aesthetics.’

Ornament can be disguised in many forms, Kent Bloomer refers to the language of ornament comparing it to music. Both being ornamental: rhythmic, orderly, with certain notation language, and most of all beautiful in expression. In fact, both music and ornament have roots far into civilisations’ history- as Bloomer claims, at the peak of a civilisation’s development (e.g. Mayan, Egyptian) there has always been a need for the ornament, the beautiful.

The origins of ornament date back to the ancient civilisations of Egypt or Greece. As Semper writes, textiles were indirectly a predecessor of ornament. He describes Persian and Greek clothing embellished with golden threads and dyed in elaborate colours. His theory claims that knotting was one of the genesis of ornament- with hairbands of Egyptian women, weaving of Persian robes, and latticework of Roman baskets. As a natural development, these elements were being transferred into the built.

Ornament has present in everyday life since the early days of humankind. According to Semper, evolution of architecture, and therefore also architectural elements, has been ornamental from the start. Only recently it has been disregarded by modernism and its function-centred approach towards architecture. One of the main referenced texts in theoretical debate on the subject is Adolf Loos’s ‘Ornament and Crime’. But his argument seems wrongly perceived by many as an absolute critique of ornamental elements:

‘Adolf Loos, despite his ‘Ornament and Crime’ (the laughably silly text without which any discussion of the subject is impossible), agrees. For Loos, the shoemaker decorating his bracings is exactly the craftsman at the heart of good design.’

As author writes, the Loos’s ‘dripping with sarcasm’ text is directed at a particular moment: aimed at the excess of Viennese Secession. One of the roots of such extreme minimalist approach was the said oversaturation of decorative elements in manufacturing in the early 1900s. With the Industrial Revolution, what used to be luxurious, like well-designed and handmade jewellery or clothing, became mundane. Elites’ taste opposed the new cheap decorative trends- ‘the plainer on object, the more valuable it suddenly becomes.’ Mass production of identical decoration applied to various fields resulted in a backlash and complete renunciation of ornament.

Only in the recent years there has been a broader rediscovery of ornament. Among all, the practices that are thought to ‘speak the ornamental language’ are Rem Koolhaas, Toyo Ito, and Herzog & de Meuron. ‘They are still sweetly delighted that they have discovered decoration’. As Edwin Heathcote writes, Mecano’s Birmingham Central Library is designed with a façade so fashion-conceptualised that it is in fact ‘more suited to Louis Vuitton in Taiwan than a civic amenity’. Additionally, the author gives an example of ‘the world’s most popular’ architect (according to tickets sold) Antoni Gaudi with his manipulation on decorative elements. In fact, altogether with Frank Lloyd Wright and Charles Rennie Mackintosh all the mentioned architects are widely (by public and in-discipline experts) admired for their architectural and compositional taste.

However, with reference to ornament or decoration there is no clear and agreed-upon distinction between the two. With delving deeper into the subject more questions arise: what is ornament and, consequently, decoration? How can ornament influence and enhance architecture?

Ornament and Architecture

‘Architecture, in such a way denying the quintessence of arts, did in its gradual progress in no way pass from simplicity to riches and from riches to superfluity (however much this assertion may contradict traditional viewpoints). Rather, it was with all simplicity of its basic forms highly decorated and glittering from the start, since its childhood. This glittering chaos sorted itself out. Order and style came into being.’

Contemporary building technology and advancements in construction field allow for faster, cheaper and higher quality production which challenges modernist arguments. With the development of computer aided design tools and scripting environments, ornament in the contemporary has an opportunity to become innovative, beautiful and affordable. The previously abandoned labour and cost-intensive (and often disappearing) practices, become more economically viable ‘which allow for intricate and complex forms characteristic to ornament to be transformed from digital modelling into built reality’.

Even while considering the ease of production and affordability of ornament it is still obsolete and approached hesitantly. The role of ornament, however, cannot be underestimated- while being auxiliary to architecture it also serves as means of communicating it to the public. Rooted in the basic human need for beauty ornament can convey symbolic values as well as translate a building to ‘laymen’. As read in Architectural Review Journal: ‘Whether we think of the applied classicism of Postmodernism or the thin veneer of decorative facades engendered by digital production, ornament today is almost inevitably seen at a remove. That alienation is at the heart of the problem - and it is a problem because ornament is the language through which architecture communicates with a broader public and each remove puts another degree of separation between the profession and the public.’

While we are witnessing the renaissance of ornament, the subject itself was absent from architectural field for nearly 100 years. Therefore, there is no strong theoretical background, a broadly-agreed definition, or predetermined guidelines for creating new ornament. Most of what is theorised today confuses ornament with decoration with all the ornamental vocabulary lost throughout the ages.

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1 Isabelle Frank: Is the Term Ornament Still Relevant Today, lecture
2 Semper: Four Elements, p.270
3 Kent Bloomer: The Necessity for Ornament, lecture
4 Semper: Style, pp 223-228
5 Semper: Four Elements, p.59
8 Kent Bloomer: The Necessity for Ornament, lecture
10 Ahani: The Distinction of Ornament and Decoration in Architecture, p.2
11 Kent Bloomer: The Necessity for Ornament, lecture
12 Kent Bloomer: The Necessity for Ornament, lecture
Role of Ornament

‘In adornment man tends to express the striving for individuality, that inclination for detachment which is innate in him and is one of the main motives of human development; whatever I adorn, be it living or inanimate, a part or a whole, I endow it with a right to exist by making it the focus of relations that are valid for it alone. I elevate it to the rank of a person’.  

As shown in the previous sections, ornamental elements seem to have a strong connection to one’s perception. Going back to the roots of this phenomenon, role of ornament has been thoroughly examined by Wilhelm Worringer resulting in various books and notably his ‘Form problems of the Gothic’. His exploration displays strong focus on human psychology, taxonomy and, importantly, language of ornament. Additionally, he theorises symbolism of various styles and gives a peak at the meaning of geometry and form.

‘Symbols of the absolute in geometric or stereometric forms which offer the permanent and stability.’

With movement being a part of human routine (probably even more in our recent fast-paced lifestyle) Worringer categorizes the need for constant as an attribute of a ‘Primitive Man’. Because of the relationship of fear, in which primitive man stands to the phenomenal world, the most urgent need of his mind and soul must be to press forward in invariables, which save him from the chaotic confusion of the impressions of mind and sense.

Furthermore, while the said Primitive Man inclines poorness of ability and intellect it rather reflects basic urgencies of one’s mind. Continuing, Worringer, in this case in relation to Gothic ornament, explains: ‘Being distressed by the actual, excluded from the natural, (Gothic line) aspires to a world above the actual, above the sensuous.’ ‘For a primitive man it is not play and mere decoration delight, but a table of symbolical invariables and therefore on appeasement of dire needs of the soul.

As described, these symbolical invariables hold power to make a building more receivable- and more pleasant to the eye. With more contemporary reading, Kent Bloomer explains, referencing to Roland Barthes, necessity for a rhythm. ‘In all cultures all over the world, in the earliest stages of their existence, […] long before writing was invented, even before pietral writing (which means instruction giving) was practiced something was produced which made fundamentally distinguish man from animal- the intentional reproduction of a rhythm.

On the other hand, ornamental elements can also serve a very different purpose. Conventional elements like trusses, columns, stairs, and doors- embelished with ornament become beautiful in themselves and do not need any compositional emphasis. ‘Ornamented building can afford to be simple in function and composition.

Symbolism of Ornament: Gothic Line

‘And it is evident that the organically determined line contains beauty of expression, while power of expression is reserved for the Gothic line.’

‘The building becomes a microcosm in two ways. Firstly, the mathematical and geometrical nature of the construction is an image of the orderly universe, in which an underlying rationality and logic can be perceived.’

Continuing with lecture of the ‘Form problems of the Gothic’, Worringer gives an insight to symbolism of so-called Gothic line and its features. Contrasting it with the infinite movement of the world, he describes the line as geometric and stable. This stability is the very thing that satisfies these ‘dire needs of the soul’. It could be argued that the geometry can be interpreted and implemented in two ways (with Gothic ornament representing the former):

- ‘a spiritual vitality, for transcending the senses- that is the case with early northern ornament’
- ‘an organic vitality agreeable to the senses- that is the case with classical ornament’

Furthermore, there is a vivid distinction between the two styles: ‘this distinction between beauty of expression and power of expression is immediately applicable to the whole character of the two stylistic phenomena of Classic and Gothic art. Thus, the Gothic form will shows neither the calm expression of absolute lack of knowledge, as in the case of primitive man, nor the calm expression of absolute renunciation of knowledge, as in the case of oriental man, not yet the calm expression of established belief in knowledge, as recorded in the organic harmony of Classic art. Gothic line is full of expression, full of vitality.’

According to Worringer, Gothic line is especially powerful in meaning and symbolic values that it carries. It appeals to human senses while expressing movement of the cosmos, harmony of nature, and creating a rhythmic geometrical whole. Therefore, this continuous line arranges itself into a single moment in time, movement that is frozen and juxtaposed with the fast world.

‘Being distressed by the actual, excluded from the natural, (Gothic line) aspires to a world above the actual, above the sensuous. It requires a frenzy of feeling in order to transcend itself. Only in intoxication does it feel the touch of eternal. This sublime hysteria is that which above all else characterizes the Gothic phenomenon.’

Following the readings, ‘Gothic line’ can be described:

- Continuous, infinite
- Rhythmic
- Ornamental
- Striving for verticality

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23 Semper, Four Elements, p. 270
24 Worringer, The problems with Gothic, pp.29-30
25 Worringer, The problems with Gothic, p. 51
26 Worringer, The problems with Gothic, p. 66
27 Worringer, The problems with Gothic, p. 31
28 Kent Bloomer: The Necessity for Ornament, lecture
29 Kent Bloomer: The Necessity for Ornament, lecture
30 Worringer: The problems with Gothic, p. 51
31 Wikipedia: Gothic architecture, Symbolism and ornamentation
32 Worringer: The problems with Gothic, p. 51
33 Worringer: The problems with Gothic, pp. 51-65
34 Worringer: The problems with Gothic, p. 66
Ornament

'The relation between an ornament and its host thus became an absolute first principle in our discourse. A principle that raised the question: should the visual distinction between figures of ornament and the pure form of its host remain legible in architecture?' 26

Ornament relies on the built elements- in architectural context windows, doors, friezes, walls, or even door handles. The ornamented host often possesses utilitarian characteristics- practical properties of their own that are conventionally understood. 27

Following etymology of 'ornament', it was derived from the Latin 'ordo' (and before: the Greek 'cosmos') and refers to order- something that is limited in variation by introduction of mathematical and geometrical constrains. 'Their (ornaments') function is to embed part of cosmos into a concrete things thus becoming a site for the complexity of cosmic forces to be visually represented. 28

Ornament cannot be predetermined- it has to be involved into an object making it inseparable from its host. Symmetries and variations of ornament can indirectly explain forces inside. Moreover, these geometrical constrains and limited number of motives are a prerequisite for an ornament to be understood. 29

Ornament represents beauty through form and object's properties. It directly relates to order and harmony. It can present function of the ornamented, represent structure or emphasize the whole geometry. What additionally distinguishes ornament is that it follows some geometrical logic. 30

On geometry of ornament, Semper gives guidelines on how it arranges itself in an 'ornamental field'. The three necessary conditions for a formal beauty to emerge:

1. symmetry
2. proportionality
3. direction 31

Following the precedents such are the prerequisites for ornament to emerge:

- Symmetrical
- Proportional: transformable in scale
- Direction-oriented
- Host-specific
- Constrained mathematically
- Motif-based

Decoration

Following etymology, '[the word] is a derivation of Late Latin 'Decorationem', which means "The act, process, technique, or art of decorating"; "Something used to decorate, especially when put up temporarily to celebrate or call attention to a special occasion."

As opposed to ornament, decoration does not follow cohesive geometrical principles. It is representational and often only appearance focused- 'mostly introduced as temporary objects whose dignifying impression is a result of exhibiting local conventions regarding propriety, good taste and good manner (Decorum) and not necessarily their beautiful form.' 32

Consequently, Rococo's decorations do not qualify as ornament as they are not tightly connected to objects they occupy. An ornamented picture frame ornaments the picture itself, and its influence stretches to a surrounding wall at most. Rococo's strong frame ornamentation corresponds mainly to well-composed arrangement of visually-pleasing decorative elements. Such elements could be taken away from their intended composition and placed in another while still maintaining their pleasing (and functional) character. 33

As another example, it could be claimed that painting a room red would be something decorative: added. Just like with symbols and portraits embedded into a building's façade: for example, while being auxiliary to their host they could be ornamental (as an adjective) but are not an ornament per se. As Kent Bloomer explains, the two expressions: ornamental and ornament, are separable and have different meanings. A decorative piece can be ornamental but is not an ornament in the strict meaning of the word.

Referring to a connection with its host, decoration varies from ornament. The former is more autonomous as a figure does not intimately engage with an object: consequently, it is not inseparable from the object. Such examples include predetermined and conventionalised items that can easily be detached and still function on their own (or in another environment). Works of art, for instance, can be moved for exhibits while still keeping their decorative character and beauty of expression. 34

- Appearance-focused
- Not host-related
- Displaying good taste (Decorum)
- Often not following formal rules

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26 Kent Bloomer: The Necessity for Ornament, lecture
27 Kent Bloomer: The Necessity for Ornament, lecture
28 Ahani: The Distinction of Ornament and Decoration in Architecture, p.3
29 Kent Bloomer: The Necessity for Ornament, lecture
30 Robert Adam: Classical Architecture: A comprehensive Handbook, p. 182
31 Semper: Four Elements, p.128
32 Ahani: The Distinction of Ornament and Decoration in Architecture, p.2
33 Ahani: The Distinction of Ornament and Decoration in Architecture, p.3
34 Kent Bloomer: The Necessity for Ornament, lecture
35 Kent Bloomer: The Necessity for Ornament, lecture
Architectural Detail

"Ornament is used on literally dozens of occasions by Palladio; sometimes it is clear that the word is focused or 'loaded' in the sense that it refers to Albertian theories to the effect that columns, capitals, bases, pilasters, doors, and windows were ornaments... We are not sure, however, whether Palladio intended this word to carry a theoretical weight on every occasion; this question need not affect the translation a great deal since the word can be translated as 'ornament' in many cases, but there are occasions when 'decoration' or other words would serve better." 58

Similarly to ornament, architectural detail is also host-specific. However, when ornament is an auxiliary to such object, the detail is in fact a part of the host and thus tightly bonded with it. Therefore, architectural detail can be classified with an 'inner' character in relation to the built-meaning, its strong connection with tectonics of a structure.

Moreover, the said detail is often utilitarian-serving a particular function. While it is often designed and displayed in a pleasing way, architectural detail is closely relating to structure or construction process of an object. Furthermore, what differs architectural detail from ornament is its lack of symbolic, and often geometric, properties. 59

To summarize architectural detail's characteristics:

- Tectonic value
- Structurally bonded with host
- Often relating to construction processes
- Without symbolism
- Utilitarian

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58 Palladio, translator's note [Tavernor]: The four Books on Architecture
59 Carlson-Reddig: detail, Detail, Ornament and decoration: A Taxonomy, p.5
Research/Study
Sacred Cut

Nephroid \( g = 2 \)

Cut: two squares

Rotated circles/centre

Hypocycloid

Arcs equal to \( d/2 \)
Symmetries

Rotation (anticlockwise)

\[ A = \begin{bmatrix} \cos \theta & -\sin \theta \\ \sin \theta & \cos \theta \end{bmatrix} \quad \text{and} \quad h = 0 = \begin{bmatrix} 0 \\ 0 \end{bmatrix} \]

centre \( O \) of an angle \( \theta \)

\( \theta = 0 \) → identity
\( \theta = \pi \) → symmetry through \( O \)
\( \theta \in [0, 2\pi) \) often \( 2\pi/n \)

Symmetry: Axis

\[ A = \begin{bmatrix} \cos 2\theta & \sin 2\theta \\ -\sin 2\theta & \cos 2\theta \end{bmatrix} \quad \text{and} \quad h = 0 \]

\( \theta = 0 \) → \( x \) axis
\( \theta = \frac{\pi}{2} \) → \( y \) axis
\( \theta \in [0, \pi] \)

Rotation + Scaling

\[ A = \begin{bmatrix} \lambda \cos \theta & -\lambda \sin \theta \\ \lambda \sin \theta & \lambda \cos \theta \end{bmatrix} \quad \text{and} \quad h = 0 \quad \lambda > 0 \]

- cyclic symmetry - no axis but centre of symmetry
- dihedral symmetry: at least one symmetry axis
- more than one symmetry axis - has a centre of symmetry (the intersection of the axes)

\( C_n \) - cyclic symmetry only
\( D_n \) - having \( n \) symmetry axes (also cyclic)

\( C_n \) - \( n \) rotations of motif around the centre
\( D_n \) - can also be generated by \( n \) reflections through \( O \)

- to find the product \( t_1 \cdot t_2 : t_3 \) in row, \( t_2 \) in column (down)
- \( t \) always appears first

\( C_1 \)
\( \begin{array}{cccc}
  i & 1 & i & 1 \\
  i & i & 1 & 1 \\
  1 & 1 & 1 & 1 \\
  1 & 1 & 1 & 1 \\
\end{array} \)

- transformed in itself by identity

\( D_1 \)
\( \begin{array}{cccc}
  i & 1 & S_1 & S_2 \\
  i & 1 & S_1 & S_2 \\
  1 & 1 & 1 & 1 \\
  1 & 1 & 1 & 1 \\
\end{array} \)

- transformed in itself & by a reflection \( S_1 \) with symmetry axis

\( C_2 \)
\( \begin{array}{cccc}
  i & 1 & \bar{1} & \bar{1} \\
  i & i & 1 & 1 \\
  1 & 1 & 1 & 1 \\
  1 & 1 & 1 & 1 \\
\end{array} \)

- transformed in itself & rotation \( \pi \) (with \( \theta = \pi \))

\( D_2 \)
\( \begin{array}{cccc}
  i & 1 & S_1 & S_2 \\
  i & i & S_1 & S_2 \\
  S_1 & S_1 & 1 & 1 \\
  S_2 & S_2 & 1 & 1 \\
\end{array} \)

- transformed in itself & rotation \( \pi \) (with \( \theta = \pi \))
& two reflections \( (S_1, S_2) \)

\( C_3 \)
\( \begin{array}{cccc}
  i & 1 & \bar{1} & \bar{1} \\
  i & i & 1 & 1 \\
  \bar{1} & \bar{1} & 1 & 1 \\
  \bar{1} & \bar{1} & 1 & 1 \\
\end{array} \)

- transformed in itself & rotations \( \pi \) \( (\theta = \frac{2\pi}{3}, \theta = \frac{4\pi}{3}) \)

\( D_3 \)
\( \begin{array}{cccc}
  i & 1 & S_1 & S_2 & S_3 & \frac{1}{2} & \frac{1}{2} & \frac{1}{2} \\
  i & i & S_1 & S_2 & S_3 & \frac{1}{2} & \frac{1}{2} & \frac{1}{2} \\
  S_1 & S_1 & 1 & \frac{1}{2} & \frac{1}{2} & \frac{1}{2} & \frac{1}{2} & \frac{1}{2} \\
  S_2 & S_2 & \frac{1}{2} & 1 & \frac{1}{2} & \frac{1}{2} & \frac{1}{2} & \frac{1}{2} \\
  S_3 & S_3 & \frac{1}{2} & \frac{1}{2} & 1 & \frac{1}{2} & \frac{1}{2} & \frac{1}{2} \\
  \frac{1}{2} & \frac{1}{2} & \frac{1}{2} & \frac{1}{2} & \frac{1}{2} & 1 & \frac{1}{2} & \frac{1}{2} \\
  \frac{1}{2} & \frac{1}{2} & \frac{1}{2} & \frac{1}{2} & \frac{1}{2} & \frac{1}{2} & 1 & \frac{1}{2} \\
\end{array} \)

- transformed in itself by rotations \( \theta = \frac{2\pi}{3}, \theta = \frac{4\pi}{3} \)
& by reflections \( S_1, S_2, S_3 \) (axis)

\( D_3 \) includes all previous tables
Sketches
Concept Arts
Panel 1
Window Frame: Elusive Line

"Thus, the Gothic line will show neither the calm expression of absolute lack of knowledge, as in the case of Gothic for man, nor the calm expression of absolute assurance of knowledge, as in the case of the apocalyptic man, nor yet the calm expression of established belief in knowledge, as revealed in the organic harmony of Classic art. Gothic line [in full of expression, list of values]

Warnier: The problems with Gothic, pp. 31–45

'Elusive line’s function is to embed part of oneself into a concrete thing thus becoming a site for the complexity of cosmic forces to be visually represented.’

Alten: The Demise of Ornament and Decoration in Architecture, p. 3

Rose Window: Seeming Rotation

In adolescence man tends to express the striving for individuality, that inclination for detachment which is inherent in him and is one of the major motives of human development. Whenever we, in the living or inanimate, a part or a whole, clothe it with a right to exist by making it the locus of relations that are valid for it alone, I devote it to the realm of a poetic.

Source: Rose Elements, p. 170

Being detached from the actual, excluded from the natural, Gothic line aspires to a world above the actual, above the sequential. (For a poetic man) it’s not just mere decoration, delight, but a stable of symbolic ‘belongings’ and therefore an approximation of extra means of the soul.

Warnier: The problems with Gothic, pp. 31–46

And it is evident that the organically determined line contains more beauty of expression, whole power of expression is reserved for the Gothic line.

Warnier: The problems with Gothic, p. 51

Numerous geometric approaches, a rose window interlocks with its components. In pursuit of individuality, each part becomes different.

The highlighted elements must then be treated separately and then juxtaposed in an attempt to expand into a vertical form.

Diagram based on the drawings from Gothic Architecture: 14 Plates from the Brandes’ Tract, p. 36

Rose window diagram: background based on a drawing from the article ‘Tracery’ by Herbert Lockham
**Wood Carvings: Weaving Threads**

Adornament is, in fact, a very remarkable cultural-historical phenomenon. It belongs to the prerogatives of man. There is perhaps no other object which he shares.

No animal shares with us the art of adorning his body. The first and most significant step towards art, in adornment, is the evolution of the complete order of formal aestheticism.

*Semper: Four Elements, p. 270*

The origin of ornament can be traced to the ancient civilizations of Egypt and Greece. As Semper writes, textiles were intrinsically a precursor of ornament. He describes Persian and Greek clothing embellished with golden threads and dyed in elaborate colors. The theory claims that weaving was a part of the genetics of ornament, with barbells of Egyptian women, weaving of Persian tribes, and latticework of Roman palaces. As a natural development, these elements were transferred into the built.

*Semper: Style, pp. 212-216*

Ornamental being can afford to be simple in function and composition.

*Boeht: The Usefulness of Ornament*
Panel 2
Arches Semi-Horizontal

The cluster line, as we discussed on page 24, is applicable for both horizontal and vertical movements. Arches become essential elements of the prototype. Consequently, an arc-shaped host appears as the most suitable. Displaying its mass-like property, the elements become arches. With analogy to the Gothic, the arches become the substance of semi-horizontal expansion.

Based on the previous study concerning ornament, the following prerequisites are met:

Symmetrical: through elements' middle arc guide
Proportional: transformable in scale, vertically expandable
Direction-oriented: semi-horizontal
Host-specific: arch
Motif-based: arch motif

The following diagrams present example iterations of the arch creation system.

Columns: Vertical Line

Distancing from the mass window geometry, the prototypes display structural variability in vertical objects. The elements are composed of a series of continuous lines with varying emphasis on vertical exaggeration. With its cylindrical character, the prototypes become columns supporting the structure. The Gothic 'vertical' is conveyed with seemingly organic growth of the line.

Based on the previous study concerning ornament, the following prerequisites are met:

Symmetrical: circular symmetry & transformation
Proportional: transformable in scale, vertically expandable
Direction-oriented: vertical
Host-specific: cylindrical
Motif-based: continuous infinite curve

The following diagrams explain the creation process of an example column element.
Surface: Horizontal Line

Similar to the blending rhythm prototypes, the
rhythms here are created between guiding lines.
Thus, the line changes direction into the opposite
horizontal. This structure is then used to
compose a surface, seamlessly to the
Guiding Line, allowing for creating subsets
organized by the curve.

Based on previous study concerning ornamentation,
the following prerequisites are met:

Symmetrical or triadic, rhythmic
Proportional: dependent on elements positioning,
suitable with horizontal
Direction-oriented: horizontal

The following diagrams explain the creation process
of an example variant. The process can also describe
elements like floor, wall or vault.

1. Middle points between each of the columns are found.
   Each section is then generated by a parameter:
   \( D = 18 \)
   \( E = 30 \)
   \( G = 36 \)

2. The creation of arch ribs. Curve
   a) start \([0,0,0]\)
   b) end \([10,10,10]\)
   c) fitting points \([0,0,0]\)

Weaver: Transitions

The weaving line requires bonds within which it is
applied. As with the spiral prototypes, the weaving is
dependent on elements meant to intersect. It does not
function on its own and requires certain constraints.

Therefore, the prototype becomes a connector
between geometries allowing for smooth transitions.
The result continues to reinforce the uninterrupted
character of the Guiding Line.

Based on the previous study concerning ornamentation,
the following prerequisites are met:

Symmetrical: based on geometries being connected
Proportional: dependent on elements positioning, distance
dependent
Direction-oriented: either vertical or horizontal

The following diagrams explain the creation process
of example elements. These include variations:
column-arch, arch-arch, arch-curve.

1. Branching off columns through other elements.
2. Timing of arc formation of the weaving elements.
3. Target arc: \( A \)
4. Creation of arches
   a) arch at point A
   b) arch at point B
5. Example with two arches branching from the column.
6. Pointed arc-arc
7. Semicircle-arc-arc
8. Scissors arc-arc

Arched Arch
Prototypes