

TRANSLATION

Proceedings of the
**Society of Architectural Historians,
Australia and New Zealand**
Vol. 31

edited by Christoph Schnoor
(Auckland, New Zealand SAHANZ and Unitec ePress;
and Gold Coast, Queensland: SAHANZ, 2014).

The bibliographic citation for this paper is:

**Ashley Paine, "Defining Stripes in the Architecture of Mario Botta," in
*Proceedings of the Society of Architectural Historians, Australia and New Zealand:
31, Translation*, edited by Christoph Schnoor (Auckland, New Zealand: SAHANZ
and Unitec ePress; and Gold Coast, Queensland: SAHANZ, 2014), 567-578.**

Published in

*Auckland, New Zealand: SAHANZ and Unitec ePress [ISBN - 978-1-927214-12-1];
and Gold Coast, Australia: SAHANZ [ISBN - 978-0-9876055-1-1]*

*All efforts have been undertaken to ensure that authors have secured appropriate
permissions to reproduce the images illustrating individual contributions.
Interested parties may contact the editor.*

*This work is licensed under a
Creative Commons Attribution-NonCommercial 4.0 International License.*



Ashley Paine, *University of Queensland*

Principles for the Definition of a Striped Architecture

The striped façade of Mario Botta's Watari Museum of Contemporary Art in Tokyo (1985-90) is a bold presence in the city's urban landscape. Its horizontal bands of pale grey concrete and inlaid black stone, speak at once of Botta's visual signature, and of a tradition of striped masonry construction that spans some two thousand years of occidental building history. While polychrome stripes are a recurrent motif in many of Botta's works, there are also a large number of projects in which seemingly inter-related techniques mark his building surfaces with other, more subtle horizontal articulations. These include the use of rustication, recessed courses of brickwork, as well as other alternating bands and textures of masonry claddings, all of which result in linear patterns of light and shadow, solid and void, colour and finish. These quasi-striped buildings blur the distinction between Botta's striped and non-striped projects, and expose broader problems for the study of striped architecture: not least, the definition of what constitutes a striped building. They also open up questions about the relationship between stripes, lines and other such articulations of the surface.

Building on a larger research project on the history, meaning and visual operation of striped buildings, this paper uses Botta's work as a vehicle to examine the range of ways in which stripes might be manifested in architecture more generally. The paper's key purpose, therefore, is to define what a striped building might actually be and, at the same time, to make distinctions between the use of stripes and other ostensibly or pseudo-stripy techniques. Through such comparisons, the paper also exposes stripes to other related terms and concepts in architecture that establish new insights, language and criteria for the study of striped buildings - even those as obviously and emphatically striped as Botta's Watari-um.

In 1990, Swiss-born architect Mario Botta completed the Watari Museum of Contemporary Art in Tokyo, better known as the Watari-um (fig. 1). It is notable as Botta's first museum, but also for its striped façade: a striking combination of pre-cast concrete with bands of inlaid black granite. Certainly, the Watari-um is one of Botta's most boldly striped projects, but it is not the only one. Across more than forty years of practice, a significant number of Botta's works have employed stripes with similar graphic intensity, including the Ligornetto House in Ticino (1975-76), the Edificio Ransila 2, Lugano (1985-91), and the Chiesa di San Giovanni Battista, Mogno (1986-96). Elsewhere, as part of a larger research project on striped architecture, I have analyzed the historical and cultural context, the meaning and the visual function of Botta's stripes - aspects of his practice that has been mostly ignored or glossed over by scholars of his work.¹ I have also investigated the long tradition of striped masonry construction in Western architecture, which includes Botta, and can be traced back more than two millennia.² Notable examples include: the fifth-century Theodosian Walls in modern-day Istanbul; the remarkable thirteenth-century Italian cathedrals of Siena and Orvieto; the medieval black and red brick banding of some northern German *Backsteingotik*; the red and white masonry stripes associated with certain architecture of the Netherlands and Belgium known as *speklagen*, as well as countless Victorian-era appropriations of them all by English architects including William Butterfield, G.E. Street, Alfred Waterhouse, and Richard Norman Shaw.

For my broader study, this expansive historical canon and its established techniques of polychrome masonry have been used to define the limits of what constitutes a striped building. However, there are also a large number of buildings that use ornament and construction techniques that often resemble stripes, but are much more difficult to define as 'striped'. These buildings typically employ bands, bars and lines in different materials, textures, colours, proportions and alignments to articulate the building surface. Consider, for example, the classical use of rustication, and the traditional application of stringcourses, moulding and cornices that all create or emphasise horizontal lines, not to mention the more recent appearance of repetitive strip windows on so many ubiquitous city high-rises. Indeed, there are countless such buildings which sit on the fringes of the striped architecture canon, blurring and challenging its boundaries.

Likewise, Botta's practice is brimming with examples that complicate a simple distinction between what is or isn't striped, especially through his repeated use of banded brick textures and shifting surface alignments (fig. 2). To be clear, however, this paper is not about Botta's work, but rather, a broader concern for the definition of striped architecture. Still, his work remains central to the following discussion. In particular, it provides this paper with a constant: a specific reference point in an otherwise sprawling and highly variable historical field. Moreover, his work manifests a wide

-
- 1 Ashley Paine, "Botta's Striped Historicism: Historicism, Myth and Fabulation in Mario Botta's Stripes," in *Fabulation: Proceedings of the 29th Annual Conference of the Society of Architectural Historians, Australia and New Zealand* eds. Stuart King, Anuradha Chatterjee and Stephen Loo (Launceston: SAHANZ 2012).
 - 2 Ashley Paine, "Façades and Stripes: An Account of Striped Façades from Medieval Italian Churches to the Architecture of Mario Botta," in *Audience: Proceedings of the 28th Annual Conference of the Society of Architectural Historians, Australia and New Zealand* eds. Antony Moulis and Deborah van der Plaats (Brisbane: SAHANZ 2011).

range of stripy and quasi-stripy techniques that are common across the historical canon, making his practice particularly valuable for identifying and defining the limits of striped architecture.



Fig. 1: Mario Botta: The Watari-um (Watari Museum of Contemporary Art), Tokyo (1985-90). Photograph by Ashley Paine, 2010.

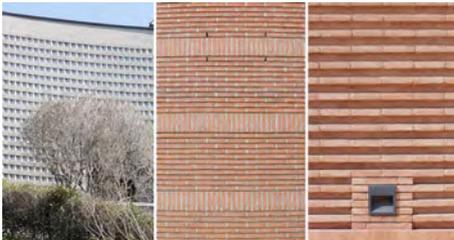


Fig. 2: Mario Botta: (L-R) House, Morbio Superiore (1982-83), detail; Edificio Residenziale e Studio, Lugano (1985-90), detail; and Chiesa del Santo Volto, Turin (2001-06), detail of ancillary building. Photographs by Ashley Paine, 2012.

Compounding the problem of definition, however, is the loose and imprecise language we have available to us to describe such different kinds and degrees of striped buildings. Whereas we can speak of different types of stripes in textiles and fashion – discerning, for example, Breton stripes from pin stripes or the iconic stripes of Paul Smith – distinctions in architecture are not so easily made. In fact, I would argue that this lack of a precise vocabulary with which to talk about stripes is in part responsible for the absence of critical attention given to striped architecture.

The purpose of this paper, therefore, is two-fold. First, is to examine the margins, limits and thresholds of stripes, in order to make a more precise formal description of what constitutes a striped building. Due to the lack of existing literature, this aspect of the paper relies on original graphic studies and primary observational analysis, to construct new criteria for the definition of striped architecture. Second, the paper examines the terminology of stripes, and their relationship with other analogous forms and related techniques for articulating architectural surfaces. This aspect of the paper proceeds through a detailed textual analysis of such terms and concepts, alongside examples taken largely from Botta's work. It enables a more precise vocabulary of formal and semantic distinctions to be established, and brings clarity to the ambiguous language of stripes. To these ends, it is perhaps pertinent to begin with the definition of stripes in a broader context.

Defining Stripes: Three Characteristics

The Oxford English Dictionary (OED) provides several definitions for the term 'stripe', the most relevant of which proceeds via the description of textiles below:

"stripe, *n.*³

1.a. In textile fabrics, hence *gen.* (e.g. in the coat of an animal, a flower, a decorative pattern), a portion of the surface long in proportion to its breadth, or uniform width, and differing in colour or texture from the adjacent parts."³

Here, three key characteristics of stripes can be identified to establish the basic criteria for striped architecture in this paper, all of which presuppose a single, planar surface. The first characteristic – that a stripe forms part of a “decorative pattern” – seems almost incidental to the OED's description, appearing only as an illustrative example. For this paper, however, pattern is argued to be a more essential constituent of stripes, and is discussed under the rubric of 'Compositional Structure'. The second characteristic of stripes is examined under the heading of 'Proportion' and follows the OED's statement that a stripe is “long in proportion to its breadth”. The third characteristic captured by the OED is self-explanatory: a stripe is “differing in colour or texture from the adjacent parts”. This is discussed in the final part of the paper in terms of 'Contrast'.

While these characteristics are widely understood intuitively (if not explicitly) as an abstract or immaterial concept of stripes, their translation into architectural form occurs in a wide variety of ways, often producing ambiguously striped results. As such, the following paper proceeds in three parts; each structured around one of the three characteristics of stripes. Each part also introduces associated terms and concepts that are used to help build a vocabulary of stripes, starting below with the pairing of lines and stripes.

Compositional Structure: Lines and Stripes

Without very much effort, one can make a substantial list of words and concepts that are ostensibly related to, even synonymous with, the idea of a 'stripe'. These include: line, band, bar, strip, streak, stroke, strata, striation, slash, ribbon, row, strap, track, belt, datum, and so on. While some of these terms have very similar origins, all of them share with stripes a common formal foundation in the geometry of the line. The idea of a line is also useful in the discussion of the first key principle of stripes: their pattern, or 'compositional structure'.

Not surprisingly, the OED contains numerous definitions for the term 'line'. One of the more relevant ones for the present discussion defines a line simply as a mark on a surface that is “long in proportion to its breadth”. Elsewhere, the OED also explains lines as “geometrical figure[s] of] ...

3 OED Online, s.v. "stripe," accessed 06 January 2014, <http://www.oed.com>.

continuous extent ... without breadth or thickness".⁴ From these definitions, two kinds of lines can be identified. The first kind of line is a concept: an intangible vector with longitude and directionality, but without thickness or material form. In architecture, these lines might be identified as immaterial edges or boundaries that separate and divide. They are also akin to Alberti's concept of lineaments, and the use of abstract, regulating lines in architectural composition.⁵ The second kind of line is a physical one exhibiting minimal, but still measurable, thickness (such as a pencil line). This latter type of line is therefore more closely aligned with the idea of a stripe, and of interest to the discussion here.

There is, however, a key difference. While lines share with stripes a proportional disparity between length and width, lines are generally thought of as discrete forms. In contrast, this paper argues that stripes are more readily conceived of in a pattern or group. Arguably, in common parlance, a description of a single, two-dimensional linear form might use words such as 'band', 'line', 'ribbon' or 'strip'. The word 'stripe' is more routinely used in its plural form, 'stripes', and employed to suggest an array of linear marks across a surface: to call a given figure a stripe, often implies the presence of other stripes.⁶ Michel Pastoureau, author of *The Devil's Cloth: A History of Stripes* appears to agree. In this historical account of striped textiles, he describes stripes as a structure, therefore implying their definition through a relational arrangement of multiple parts.⁷

Further arguments for the importance of this compositional structure are evidenced in fig. 3, which attempts to simplify some of the structural issues involved in the definition of stripes. Here, 'A' illustrates a regular parallel distribution of elongated forms and is unquestionably striped. 'B' removes the regularity of 'A', but maintains the parallel structure and would again be identified as a striped pattern by most observers. In 'C' the forms are no longer straight, but the parallel arrangement of forms has been maintained and would still conform to a conventional concept of stripes. In 'D', both the regularity and parallelism of the forms are lost, but each line appears to respond to the adjacent one, in an irregular, but relational, structure that for most observers would still be considered striped. Importantly, the pattern shown in 'D' never suggests the convergence of its lines, whereas the extension of the lines shown in 'E' reveals their crossing. This is significant because, despite the regular repetition of just two similar elements in 'E', the convergence of lines seems to weaken its identification as striped. (In fact, if 'E' were reproduced across a larger surface,

4 OED Online, s.v. "line," accessed 06 January 2014, <http://www.oed.com>.

5 Possible links exist between the concept of lineaments and Botta's use of stripes. In particular, I would argue that one of the functions of Botta's stripes is to annotate the surface of his buildings with a physical marking of the invisible lines and geometries that regulate his compositions. However, such connections lie largely outside the concerns of this paper.

6 There are exceptions. Racing stripes, also known as 'rally stripes' or 'Le Mans stripes', are frequently found only in pairs, scribed over a car along its longitudinal axis.

7 Michel Pastoureau, *The Devil's Cloth: A History of Stripes*, trans. Jody Gladding (New York: Washington Square Press, 2003), 3, 14, 91. Moreover, he argues that the structure of stripes also makes them figures. For Pastoureau, structure and figure are indistinguishable, and are key components of his definition of stripe. This is interesting in that as a figure, stripes are necessarily experienced very differently to lines: they exceed lines to become image-like and affective. They might also be said to become a field.

it would actually result in a diamond pattern.) Finally in 'F', the pattern could hardly be described as striped: although the structure is once again parallel and regular, there exists no relation between its adjacent parts.

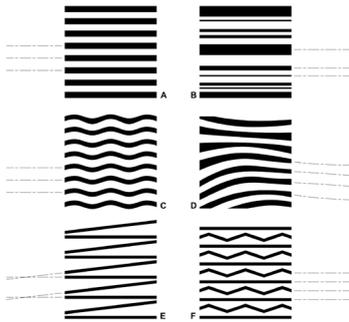


Fig. 3: The compositional structure of stripes.
Diagramme by Ashley Paine.

Ultimately, the patterns shown in 'E' and 'F' are most revealing. A conventional description of them might use terms such as 'lines' or 'ribbons', but probably not 'stripes'. It might therefore be concluded that it is not the straightness, regularity, uniformity or even parallelism of linear components that makes a striped pattern or figure. Rather, it is the relationship between adjacent linear forms - what this paper has termed the 'compositional structure' of stripes - that is most critical. The other interesting observation to emerge from both 'E' and 'F' is that the breaking down of a striped structure leaves us nothing but a group of unrelated *lines*. We might therefore state that while not all lines are stripes, all stripes are made up of lines.

When applied to the material realm of architecture, these principles of lines and stripes seem to be maintained. Botta's Watari-um façade, for example, exhibits a compositional structure wherein the surface of black granite and grey concrete is divided into stripes of equal size. This produces a particularly salient pattern that could be described as having a strong striped structure.



Fig. 4: (L-R) Royal Horticultural Society Old Hall, London (1904).
E. J. Stebbs; King's Weigh House Chapel, London (1889-91).
Alfred Waterhouse.
Photographs by Ashley Paine, 2012.

In fact, this strong figural arrangement is common to almost all of Botta's works - even those which, for reasons to be explained later, occupy a more marginal position in his striped oeuvre. We must look outside of Botta's practice to find more 'weak' striped compositional structures, and there are

many examples. For instance, the Arts and Crafts style Royal Horticultural Society Old Hall, London, (1904) by E.J. Stebbs is ornamented with numerous horizontal bands, but they lie almost too far apart to connect with each other in an identifiable structure (fig. 4).

These lines also appear to relate more strongly to the building's fenestration than to each other, thereby undermining the unity of the striped pattern. Clearly, the way in which stripes are employed on a building is an important factor, and in this case, the weak compositional structure of the building's pattern locates it at the very limits of what might be deemed striped. By comparison, the brick and terracotta bands on Alfred Waterhouse's King's Weigh House Chapel, London (1889-91) are fewer in number and are distributed more irregularly (fig. 4). Using the criteria of compositional structure, it could be argued that it falls short of being identifiable as a truly striped building.

Proportion: Bars, Bands and Stripes

The second key attribute of stripes identified by the OED to be discussed in this paper regards their proportion: a stripe is longer than it is wide. This seemingly simple definition, however, obscures more complex issues, not least of which involves the proportional limits of stripes: that is, how long or short a stripe can be before it is no longer thought of as a stripe. A short stripe, for instance, might more readily be called a 'bar'; an even shorter one a 'rectangle'. A very long stripe, on the other hand, might be more comfortably referred to as a line. Even when the proportions fall within the realm of what we might accept intuitively as those of a stripe, we are just as likely to call it a 'band' (or perhaps a 'ribbon' or 'belt').

Despite their proportional equivalence with stripes, bands, much like lines, tend to be conceptualised as discreet individual figures. Even though a striped surface could be described as 'banded', bands are unlike stripes in so far as the appearance of one band does not imply the presence of others. In other words, they do not imply a compositional structure. Still, a band is not a line either: lines define boundaries between two different conditions, they demarcate and divide. In contrast, a 'band' emerges etymologically from the idea of restraining or binding different things together.⁸ In architecture too, bands tend to have a unifying visual function, as Gottfried Semper has argued.⁹

Acknowledging these semantic differences, further problems regarding the proportion of stripes, bands and lines emerge when they are applied to architecture. In particular, the number of stripes on a surface, and their proportional relationship to that surface, can affect their very definition as stripes. These issues are highlighted in fig. 5 below, which articulates some of the proportional limits of stripes.

8 OED Online, s.v. "band," accessed 06 January 2014, <http://www.oed.com>.

9 Gottfried Semper, introd. and trans. Harry Francis Mallgrave, *Style in the Technical and Tectonic Arts, or, Practical Aesthetics* (Los Angeles: Getty Research Institute, 2004), 116-18.

Beginning with the column on the left, all of the stripes maintain an identical width. At the top of the column, two broad stripes are illustrated - one of each colour. For structural but also proportional reasons, this does not successfully appear striped: there are simply not enough alternations of colour to produce a recognisable pattern, nor are the bands sufficiently long enough in relation to their width to be considered a single stripe or band. (These kinds of proportional problems can be seen in James Stirling and Michael Wilford's Social Science Research Centre (WZB) (1979-87) in Berlin, where low walls carry just a few bands in pink and blue, making it difficult to convincingly label it as striped.) At the bottom of the column, the diagram shows a series of narrow stripes that are almost too fine to be read as striped and, instead, begin to merge into a single block of colour. (Such perceptual contingencies are clearly demonstrated by the *Backsteingotik* striped brickwork of the Holstentor in Lübeck, Germany (1469-78) which alternates in single courses of deep red and black-glazed bricks). Continued over a longer surface, these thin stripes may even be read as lines. The principle that may be claimed here is that there are limits to stripes where they are proportionally too thick, or few in number, that they can no longer be read as stripes. Additionally, limits begin to come into play when stripes are so thin that they are risk being seen as lines or as a single, optically blended colour. Of course, this is entirely conditional upon the viewer's relative distance to the surface, and the scale of the given striped surface itself.

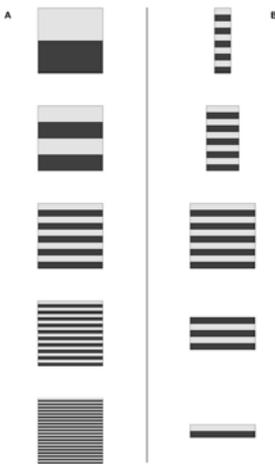


Fig. 5: The proportional limits of stripes
Diagramme by Ashley Paine.

The right column highlights other contingencies that are introduced by the shape of the surface on which stripes of the same thickness are applied. For example, if we take the tall and narrow surface shown at the top of the column, the 'stripes' appear more like a series of stacked coloured boxes. To appear stripier, a tall surface requires thinner bands of colour, alternating at more regular intervals. But, as the left column demonstrates, thinner stripes risk blending into a single colour. The opposite is also true of long surfaces, which because of their proportion require less bands of colour to appear striped. However, the bottom diagram shows that there are again limits - the pairing of just

two bands fails to achieve a sufficiently stripy structure. Ultimately what this series of diagrams highlights is that the definition of stripes according to proportion – that is, as something long and thin – is always complicated by the scale of the striped pattern, the relative size and shape of the support, and the external contingencies introduced by the viewer themselves.

Acknowledging these ever-present difficulties of definition, it is perhaps more constructive to return to the analysis of built examples. Beginning with Botta's Watari-um, it is clear that the proportions of the individual stripes, their number and relation to the overall form, all succeed in maintaining a recognisable striped pattern established by its strong compositional structure. Elsewhere, however, Botta's proportioning does not seem to produce stripes quite so successfully. For example, the columns which mark the entrance to the San Francisco Museum of Modern Art (1989–95) each consist of five bands of black stone alternating with five or six of grey. The tall proportion of the columns, paired with the small number of alternations of colour, almost unravel their stripy appearance, and therefore their connection to other striped elements of the design. Indeed, it is a proportional problem of stripes shared with many other columns, pilasters and voussoirs. The duotone interior arches of the Dome of the Rock, and the Mosque in Cordoba are but two well-known examples that produce contestably striped effects.



Fig. 6: Mario Botta: Edificio Via Nizzola, Bellinzona (1988-1991).
Photograph by Ashley Paine, 2012.

The opposite problem challenges the stripiness of some of Botta's other projects, such as the Edificio Via Nizzola in Bellinzona (1988–91) (fig. 6), which employs stripes of grey stone alternated with thin bands of polished stainless steel. This building has a much longer form than many of Botta's other projects and, while the strong compositional structure helps to maintain the pattern's legibility, the narrow proportions of the inlaid steel threaten to appear as a simple array of lines.

Contrast: Striations and Stripes

The final tenet of stripes identified in the OED definition and considered by this paper concerns the role of contrasting colour and texture. It is obvious that the greater the contrast in colours used, the more prominent the striped pattern will appear. This idea requires little elaboration: the Watari-um has already evidenced the striking effects of contrasting colour. The same logic applies for contrasting textures, and again, Botta's practice presents us with many examples. These include the

pinkish-red brickwork of the Chiesa del Santo Volto in Turin (2001-06) (fig. 7), which is interspersed with courses of split-faced stone in an almost identical colour. Similarly, the Edificio Residenziale e Studio, Lugano (1985-90) (fig. 7), uses rings of brick soldier courses to articulate the cylindrical form with a series of subtle stripes that can be difficult to see except in certain light conditions. What is important about the surfaces of these projects is that they remind us of the necessary role of light in the perception of these kinds of stripes founded in texture, rather than colour. Indeed, these buildings are effectively monochromatic – their stripes would be invisible except for the variations of light and shadow created by the finish of their materials. Still, they conform to a conventional idea of stripes as a patterned two-dimensional surface, made up of alternating, co-planar textures.



Figure 7: (L-R) Mario Botta: Chiesa del Santo Volto, Turin (2001-06); Edificio Residenziale e Studio, Lugano (1985-90). Photographs by Ashley Paine, 2012.

In other projects, however, Botta breaks the contiguity of the surface, to produce buildings that are more contestably striped. Arguably, these kinds of 'striped' textures are better captured by another term – 'striation'. As the OED reveals, 'striation' is a (glacial) marking or grooving of a rock surface with parallel lines.¹⁰ It implies a pattern of lines that are literally carved out of a surface, producing a pronounced three-dimensional texture. It also provides a new term with which to describe a number of the masonry articulations found in some of Botta's most marginal striped works.

For example, the Edificio Caimato building, Lugano (1986-93) employs alternating courses of recessed brickwork, forming a debatably striped effect. It is a detail that Botta has used extensively, including on the San Francisco Museum of Modern Art and parts of the Chiesa del Santo Volto (fig. 2). Arguably, Botta's stepped bricks reference the ancient technique of rustication and its somewhat stripy appearance. Equally ambiguous are the 'stripes' of the Morbio Superiore house (1982-83) (fig. 8). Here Botta uses alternate rows of silver painted blocks laid at forty-five degrees to the wall plane, much like the decorative stringcourses of some Byzantine buildings of the eleventh and twelfth centuries.¹¹ At a larger scale, the regular alternation of strip windows and stone-clad spandrels on Botta's office tower in Busan (1989-97), or the serial deployment of sun shades on his Kyobo Tower in Seoul (1989-2003), create even more banded effects of light and shade, solid and void, with a quasi-striped appearance.

¹⁰ OED Online, s.v. "striation," accessed 06 January 2014, <http://www.oed.com>.

¹¹ Frederick Moore Simpson, *History of Architectural Development* (London: Longmans, Green, 1913), 219.



Fig. 8: (L-R) Mario Botta: House, Morbio Superiore (1982-83), elevation and detail. Photographs by Ashley Paine, 2012.

These projects and their striated surfaces are difficult to locate within the canon of striped architecture because they challenge the assumption that stripes must form part of a single surface or two-dimensional plane. This expectation exists in the vernacular understanding of the word 'stripes', but it also appears in the OED's textile-based definition. Despite this, the word 'stripes' is frequently applied to such three-dimensional surfaces, even to some where a banded or stripy pattern does not seem to be intended at all - the result perhaps of certain construction details or the relentless stacking of generic floor plates to produce tall, efficient buildings. This is significant in that the 'stripes' of such surfaces, are not necessarily a property of the surface itself, but one of its visual effects. Indeed, it could be argued that such 'stripes' are produced as a two-dimensional image or figure of stripes - that is, the recognition of a striped pattern occurs as a function of our own perception, and not of the building itself.

Still, not all rusticated buildings or serially repetitive high-rises achieve this striped effect. It seems that these three-dimensional striated stripes, more so than other kinds of stripes discussed thus far, require the successful integration of the other two characteristics of striped construction. That is, to overcome the interpretation of their discontinuous surfaces as a mere texture or series of stacked floors, these stripes require a strong striped structure, well-scaled and regularly repeated bands, and the reduction of any other lines and details that might detract. The combination of all these factors occurs in almost all of Botta's textured works cited above, permitting their entrance at least into the outer fringes of the striped architectural canon.

Conclusion

In conclusion, a few brief but important points still need to be made. For one, the paper has ultimately revealed that the three characteristics of striped building surfaces - compositional structure, proportion and contrast - operate interdependently, requiring the presence of one another to establish a striped pattern. Clearly, a building with no striped structure, or without contrasting colour or texture, could never be read as striped. That said, when a building is particularly strong in one or more of these characteristics, it can help to overcome the deficiency of others. This was shown regarding the textured and striated surfaces of Botta's buildings, where subtle differences in the surface can still produce striped buildings, but it is also true of buildings such as the Watari-um.

In fact, a closer inspection of the Watari-um façade (fig. 1) reveals a series of details, which would seem to contradict some of the principles of stripes identified in this paper. In particular, the black granite bands of the primary façade are broken by the central window cleft, and again at its edges where the bands narrow into small voids to allow light into the spaces behind. However, rather than appearing as a series of short, broken black bars across the building's surface, the Watari-um still achieves an unquestionably striped effect. Using the criteria established by this paper, it could now be said that it does so primarily through: the strength of its striped compositional structure; its high contrast of colour; and a proportion of stripes that operates effectively in its context. These strengths are enough to overcome the discontinuity of the stripes, and produce an affective and salient striped figure.

Of course, the determination of what is or isn't a striped building can invariably be subject to interpretation and the contingencies of perception. Nevertheless, this paper has established some of the criteria and limits for striped architecture, thereby providing the means with which to examine and debate such questions in future research. It also provides new terminology and rhetorical tools through which it becomes possible to speak of different kinds and degrees of striped architecture, and to make more careful distinctions between them. The paper has thereby translated knowledge that is currently understood only via tacit visual intuition and specific established cultural practices, into operative terms. Importantly, these tools can be applied a-historically, opening up the possibility of new insights not only into Botta's expansive body of striped architecture, but also into the long history of striped construction. Indeed, it is only with these tools of rhetoric and language that it is possible to write a historical account of striped architecture, and to accurately describe and distinguish between striped forms across the historical canon.