Reviewing Design References with Diagrams: A Metropolitan Performance Assessment Perspective

Guilherme Lassance

Department of Architectural Design, Federal University of Rio de Janeiro, Rio de Janeiro 21941-901, Brazil

Abstract: The announcement of major sporting events scheduled to take place in Rio de Janeiro in the coming years is now producing several radical urban transformations that are attracting the attention of renowned architects of the international circuit. All this is happening in a city where relevant architectural references have not been produced for a long while because of the prolonged economic crisis of the past. Despite these conditions, people were able to detect “invisible” design lessons to be learned in this city by sharing perceptual experiences with foreign observers who are, by definition, unaware of their preconceptions. This paper deals with the development of a strategy for re-presenting design references that are locally rooted and accessible for direct embodied experience. The strategy put forward a MPI (metropolitan performance index) drawn out from a bibliographical survey coupled with analytical spatial diagrams of different case-studies presented as a tour guide for the recognition of the architecture produced in Rio de Janeiro. It is believed that this strategy can favor the adoption of an eye attuned to contemporary theories especially interested in the spatial and programmatic concerns that today instigate the designer.

Key words: Diagram, design reference, contemporary architecture, metropolis, architectural theory.

1. Introduction

Never in history there has been such diffusion and access to information about the architecture produced worldwide. Websites, blogs and specialized electronic journals on the subject abound. In this text, the author does not intend to map or analyze this widespread content, but rather address its implications for design teaching, especially in schools geographically distant from the main centres of production of contemporary architecture. It is relevant to note that most part of the architecture produced and published in the last two decades, when the internet appeared and flourished, is concentrated in areas with privileged political and economic conditions. Unable to have direct contact with such production, students from other parts of the world become inevitable hostages of a superficial consumption of design references accessed only through images when working on their academic

projects. Local architecture seems to be no longer useful for those means.

The aim of this paper is therefore to discuss the theoretical foundations of a strategy for identifying, analyzing and representing design references that are locally rooted and accessible for direct embodied experience. It is argued that this strategy can take the form of analytical spatial diagrams of different case-studies presented as a tour guide for the recognition of the architecture produced in a far away but bustling metropolis like Rio de Janeiro in Brazil.

Indeed, the announcement of major sporting events scheduled to take place in Rio de Janeiro in the coming years is now attracting the attention of renowned architects of the international circuit. They should not find much difficulty in competing with local offices in major contracts, since the professional field of architecture was strongly affected by the economic crises of the past and yielded to the rules of uncritical marketing. Completely absent from the pages of any good collection of contemporary

Corresponding author: Guilherme Lassance, D.Sc., associate professor, research fields: design methodology, contemporary architectural theory and design education. E-mail: lassance@ufrj.br.

architecture, local projects reproduce autistic formulas devoid of experimentation and innovation regarding the current debate about the contemporary city. Much of what was achieved in terms of innovation in the best architecture produced in Rio de Janeiro while it was the capital of the country has been simply overlooked or ignored by today's real estate market. There is indeed a kind of resigned consensus among local architects that relevant architectural references have not been produced in the city for a long while. It is thus really hard to establish an itinerary for any architectural tour that would not necessarily, and almost exclusively, include the long-standing references of the celebrated Brazilian modern architecture of the 1940s-1950s.

Besides being consumed in a superficial manner, international references always carry the difficulty of linking to local context, both in terms of the physical immediacy and in the wider cultural sense, relating to the people's modes of living and inhabiting the city. These references are rarely compatible with the local cultural, social, economic and technological realities, thus contributing to the traditional and endemic separation between the academia and the professional practice. While outside the academic environment these imported architectures do not operate as design references, in schools they assist the effort of confronting the precariousness of most of the students' daily spatial experience with richer and more meaningful architectural examples, hardly helping to overcome the "absence" of concrete, built and actual demonstrations of recent production to be studied.

2. Changes in Design Attitude

The 2008 edition of the *Verb Boogazine* [1], entitled "Crisis", edited by the Catalan publishers Actar (Ballesteros et al., 2008) stated in its announcement that "architecture can not continue to be made as usual", referring to the crisis of the traditional architectural market, which came to

strengthen and accelerate the critical tendency of challenging the production of iconic objects signed by the so-called "star system" architects. In an article entitled "Death in Venice", Cédric Libert (2010) echoes this question. He develops his argument from the declaration of "death" made by his students during their visit to the 2008 Venice Biennale, about a whole generation of architects of the 2000s among them, Frank Gehry, Coop Himmelblau and Zaha Hadid herself invited by Aaron Betsky to present their works.

While the curator of the "Beyond Architecture" 2008 Biennale wagered on the "icon-giver architects", the 2010 edition, coordinated by the Japanese architect Kazuyo Sejima, assumed and emphasized, instead, the critical reaction to the production of iconic objects. Using the theme "People Meet in Architecture", she sought a "return to discipline" operated by research on space and experience. The beginning of the sequence of the Arsenale set the tone of the show. It displayed in 3D format a film directed by Wim Wenders about the Rolex Learning Center of the Federal Polytechnic School of Lausanne, designed by the SANAA Studio—which Sejima shares with Ryue Nishizawa—revealing it is more an infrastructure to be experienced than an object-icon to be admired from a distance.

3. Quarrelling Architecture Autonomy

The dichotomy between consciousness and the object is exposed, expressed in the disparity between the space depicted through the perspective and the space actually experienced by the subject [2]. The space whose qualities are supposedly controlled by the isotropic and abstract geometry can not resist the displacement of the observer and therefore its effective experience of architecture. Evoking the work of Beatriz Colomina [3], Kengo Kuma underscores how the architectures of Le Corbusier and Mies van der Rohe were dependent on the means of

contemporary photography and therefore the production of monochrome images, being thus conceived as recognizable objects to be viewed from a certain distance. To this end, they had to be clearly separated from their contexts, isolated and detached from the ground by means of “pilotis” (Le Corbusier) or “podiums” (Mies van der Rohe).

This “formalist” modern tradition takes on later the monumental version transforming itself into a great reference for international iconic architecture. Kuma opposes this architecture to the qualities of openness and lack of space proposed by traditional Japanese architecture. The author of the *Anti-Object* recalls the visit of Bruno Taut to the Katsura Imperial Villa, where he said that there is no attempt to create an object. He goes on evoking the fact that Taut compared it to the scene of an outdoor theatre, which is essentially a place of absence until the addition of people, clothes and colourful cushions creates various spaces—which he calls “architecturalized interrelationships”—concluding that it is through them that one can establish the relationship between space and time in architecture.

It can be seen just how much the author’s understanding of architecture move away from the paradigm of an autonomous and isolated object to approach the idea of an infrastructural architecture type, spatially continuous with ambiguous boundaries with its environment. The “landscape-building” of the Rolex Center, like much of the work of Sejima and Nishizawa, invests on the idea of the anti-object, opening a prospect of redemption of design modes experienced in the past but that have become invisible in a world of frenzied consumption of images and visual cues. Motivated by these issues, young foreign architects have seen in Brazilian modern architecture some design strategies to be recycled and re-incorporated. Those who stay a little longer will be able to recognize, beyond the possibilities of visual reference, a pragmatic and intense connection of the

architecture with its surroundings, the unexpected, unplanned and informal “*détournement*” favored and encouraged by the simplicity and ambiguity of the spaces.

Buildings that serve as ground-organizers of intense flows and as platforms of events reveal how the contemporary metropolis work, irreverent to its photogenic architecture, combining their processes in complex ecologies. Such traces could find reference in the notion of “metropolitan” condition, insistently put forward by Rem Koolhaas and his OMA (office for metropolitan architecture) and AMO (OMA’s research studio) partners [4]. Everywhere in these same cities you can come across situations and achievements that have become unrecognized because they were taken for granted, unconsciously naturalized or simply ignored by architects.

4. Beyond Beauty and Ugliness

This way of looking implies, therefore, in a denaturalization of the concepts of beautiful and ugly. This is essential to the attitude of transcending the external appearance or superficial image, which is often “out of date” or misconceived, to access a more structural and diagrammatic level of analyzing space [5]: a perceptual attitude adopted by Rem Koolhaas [6] when learning the “invisible lessons” of New York. More recently, one can cite a very inspiring source for this research: the amazing “Made in Tokyo” [7]. In this architectural research presented as a tour guide for the city of Tokyo, the authors look at what they claimed to be the “ugly” or at least the not celebrated part of the Nipponese capital and reveal a number of situations strongly aligned with the current debate on the problems of the contemporary metropolis. The map of Tokyo re-presented through their “invisible” architecture thus reveals “another city”, subverting the order imposed by the traditional monuments and worldwide renowned design references [8].

As can be seen on this map, the invisible lessons of

Tokyo are represented through “axonometric diagrams”. These are just schematic illustrations used to subvert and surpass the level of visual apprehension commonly high-valued by the well-calculated photographs and rendered views of the electronic journalism. Stripped of their apparent aesthetic precariousness, the invisible lessons of Tokyo might have the chance of being considered by the biased eye looking about for design references relevant to the contemporary culture.

The transaction contained in this simple strategy of re-presentation is very powerful and totally in tune with the intention of promoting change in the way people design and understand design. If they think retrospectively, they can note that the use of alternative representational resources is typical of moments of crisis of paradigms, in which the formal prescription propagated by a certain existing code system is to be criticized and re-discussed through new values. Devoid of visual compositional codes that could be legitimated or rejected, architects use schematic representations as a means to escape or delay decisions regarding the visual appearance of the building, submitting them to the programmatic imperatives less prone to the momentary instability of the aesthetic debate. The well-known distinction between “form and design” introduced by Louis Kahn or the attention given by Aldo Rossi to the concept of “type”, drawn from a nineteenth century definition, illustrate the moment of transition from modernity to the arrival of the late modern post-critical debate in the second half of the last century as put forward by Antony Vidler’s thesis on the “Third Typology” [9].

Gabriela Goldschmidt and Ekaterina Klevitsky elaborate in that sense, an excellent and very informative analysis of a collection of axonometric drawings produced by the office of the English architect James Stirling as a means to overcome the thorny question of the external appearance of projects and to value the experience and intelligence of space

design [10]. There were architects who were dissatisfied with “conventional” means of representation and found it necessary to display their work somewhat differently in order to express its meaning fully [11]. Quoting Stirling’s partner, Michael Wilford, they remember how important it was for those architects, “to be able to represent the essence of the idea” and the “architectural understanding of the building”, as distinct from an impression of how it might look in reality.

The “attitude” driven by “Made in Tokyo” is inspired by the theories advocated by Stirling’s contemporary architects that, in Japan, were also experiencing a moment of transition. The authors of the guide confessed their debt to Kazuo Shinohara, an important advocate of a rereading of the Japanese tradition as a means to counter the rationality of modern architecture. His ideas later evolved into an appreciation of the chaotic nature of the Nipponese urbanity [12], inaugurating a series of texts from various authors, who pointed to the need for studying the specificities of the Japanese city and its architecture [13]. These texts greatly contributed to the development of newer design methods that sought in the use of space diagram a means to overcome the issue of the external appearance and, as noted by Toyo Ito in his famous analysis of the work of Kazuyo Sejima, “to abstractedly describe the mundane activities presupposed by the structure” [14]. In an interview with Hans Ulrich Obrist for the 2010 Venice Biennale, architects Yoshiharu Tsukamoto and Momoya Kaijima of the Atelier Bow Wow, co-authors of “Made in Tokyo”, value the criticism towards formalism that pervades this new posture. They cite Bernard Rudofsky’s “Architecture without Architects” [15], confessing that one of their goals is to make a building that would not be done by architects.

This attitude illustrates the analysis carried on by Gerrit Confurius in his Editorial for the special issue

that the German magazine *Daidalos* dedicated to the concept of diagram, reminding people that it also reflects the spirit of the time by minimizing the importance of the artist as a creative individual and presenting architecture as something that is socially constituted and interactively produced, as a field of resonances and virtuality [16].

5. Metropolitan Performance Assessment

The axonometric diagram was thus the strategy best suited to the author's purpose of transcending the usual diffusion of design references that usually favours a visual apprehension of architecture. Besides using this type of diagram, the "Made in Tokyo" guide drew attention to some issues related to the condition of contemporary architecture in the metropolis.

5.1 Programmatic Hybridism

The Japanese authors emphasize the hybrid quality of the presented cases, reiterating what had already been identified by Rem Koolhaas in his *New Yorker* manifesto, as a typically metropolitan condition. The issue of "Pamphlet Architecture" specially dedicated to this topic, not only recalls people that the hybrid building has been a condition intimately associated to the urban dwelling with its street front shops since the ancient times, but it also uses axonometric diagrams in order to show the complexity of the programmatic composition of some externally quite simple buildings [17].

5.2 Flow Connectivity

A closer look at the conditions of metropolis allowed people, however, to incorporate other issues that are also very present in the debate about the role of architectural design in the contemporary city. In this study of the architecture of Rio de Janeiro, the author integrates thus the crucial problem of urban mobility associated with transport infrastructure projects, the articulation of multiple flows and the concept of "obliquity", proposed in the 1960s, by

Claude Parent and Paul Virilio [18].

5.3 Structural Openness

The author also considered as highly relevant, the phenomenon of informal, unforeseen and ephemeral appropriations, that have been subverting the mono-functional and specializing logic of the existing space, drawing the author's attention to the need for designing reprogrammable fields [19], much more attuned to the opportunistic temperament of globalized cities.

5.4 Site Artificiality

This study also addressed the question of the optimization of urban land driven by the concentration of activities that Rem Koolhaas and his team called the culture of congestion [20], justifying and enabling the creation of new territories in areas of difficult occupation as steep slopes and even on water [21, 22].

5.5 Image Autonomy

Finally, the question of the image from which the author seeks to escape was not ignored, because he understands that it has a rather important role in market processes that are currently taking place in the contemporary city. This paper differs, however, from the understanding that the authors, architects, usually have of its treatment as a mere means of enhancing the external appearance of designed architectures. The composition of the metropolitan image of the contemporary building incorporates, on the contrary, an own dimension, as an autonomous project, behaving as a true communication interface in which the "skin" becomes a "screen" [23].

These questions guided the definition of five categories of criteria used for the selection and the evaluation of the architecture produced in Rio de Janeiro (Table 1).

As shown in this table, each category assumes a particular design aspect that is then valued to retrieve current metropolitan issues: the mutualistic program

of the hybrid building, the articulated flows of huge mass transportation hubs, the polyvalent structure of the opportunistic generic space, the autonomous image of the mediatic facade and the recreated site associated with the redesign of hills and waterfronts through landfills and terracing techniques made economically feasible thanks to the specific conditions of the metropolis.

6. Representing Unnoted Design References

In order to illustrate the apprehension of the architecture built in Rio de Janeiro as a design reference and the difficulties associated with it, the author presents here an example of unnoted architecture located in the city centre. The case presented here is the Menezes Cortes Garage Terminal, built in the early 1970s to increase the number of parking places in the city centre. Besides the parking, the building houses a shopping centre, an intercity bus terminal and a university level school. Although its metropolitan performance, this building is completely absent of any guide of architecture and its authors are unknown.

Here, the author surrendered himself to the “difficulty of getting good pictures” that would make

possible to enhance, explain and communicate what he believe is an relevant design reference in relation to the conditions of the contemporary metropolis. This allowed people to see that the “photographic medium” by which architecture today is promoted and consumed worldwide via the Internet was clearly limited and inappropriate.

How then to explain the complex and overlapping levels of access and opportunistic and changeable combination of uses and activities with a simple camera shot? How to avoid repeating the old anthropological cliches of the precarious look and improvised design? How to convey the intelligence of the spatial structure beyond their unresolved appearance? Are people, the architects of the Internet century, eternal hostages of purely visual consumption of inhabited photogenic references inert to the frenetic everyday life of contemporary cities?

Fig. 1 hereafter re-presents, in a diagrammatic way, this building, showing how graphic strategy can be used to reveal its incredible metropolitan qualities related to its very mutualistic program, the way it articulates different conflicting flows, the flexible grid of the parking garage floors and its optimized site, transcending thus its resultant ugly appearance.

Table 1 Metropolitan performance index categories.

	MPI	Type	Definition
Program	0	Mono-functional	There is only one use
	1	Multi-functional	There is more than one use
	2	Mutualistic	Activities benefit each other mutually
Flows	0	Controlled	There is only one type of flow
	1	Managed	There is a specific device for each kind of flow
	2	Articulated	It interconnects different flows
Structure	0	Restrictive	Physical and spatial structure restricts activities
	1	Flexible	Structure allows program transformations
	2	Polyvalent	Structure allows different activities with little adaptation
Image	0	Resultant	Image is a simple result of other aspects
	1	Adjective	Image is intentionally studied to promote content
	2	Autonomous	Image is a project in itself, establishing its own rhetoric
Site	0	Occupied	The site is partly occupied
	1	Optimized	The site is fully and intensively occupied
	2	Recreated	Project involves the creation or re-creation of the site

Fig. 1 Example of diagram showing the bus terminal and garage building “Menezes Cortes” located in downtown Rio de Janeiro.

A critical analysis, whether recent or historical, could easily deprive this building of much of its qualities as a design reference. If people intend to address the real challenges of the contemporary metropolis, they must therefore provide resources for new modes of reading, understanding and representing architecture that could make them truly powerful in the design process, working as a means for the critical recognition of the unnoted lessons of architecture existing in the cities.

6. Conclusions

With the definitions of the metropolitan qualities in hand, it was possible to classify each of the studied cases and thus better understand not only their relationship with the city, but also with the other selected projects. The formulation of the metropolitan performance assessment in qualities functions therefore as a five dimensional coordinate system allowing the author to position each situation with regard to the others.

The author insists, therefore, on the idea that the assessment system thus created is not intended to review the cases in the sense of good or bad. This information seems to be much more important than an absolute rating, because it provides tangible parameters to grasp the behavior of complex contemporary architecture in the context of the cities, and also to establish a critical discussion less subject to the special effects of representation and communication media through which people's design references tend to be made known today.

Acknowledgments

The author would like to thank the Rio de Janeiro State Research Funding Agency (Faperj) for the financial support for the publication of a guide to metropolitan architecture in Rio de Janeiro. The author would also like to thank the Brazilian Agency for Higher Education Human Resources Development

(Capes) that has provided financial assistance enabling him to attend the EAAE/ARCC 2012 Conference in Milano where a first version of this paper was published.

References

- [1] V. Boogazine, *Crisis*, ACTAR Publishing, 2008.
- [2] K. Kuma, *Anti-object: The Dissolution and Desintegration of Architecture*, Architectural Association Publications, London, 2008.
- [3] B. Colomina, *Privacy and Publicity: Modern Architecture as Mass Media*, MIT (Massachusetts Institute of Technology) Press, Cambridge, 1996.
- [4] R. Koolhaas, *Delirious New York: A Retroactive Manifesto for Manhattan*, Oxford University Press, New York, 1978.
- [5] G. Lassance, D. Klouche, F. Izaga, G. Duarte, Contemporary metropolitan conditions: New challenges for design education, in: G. Schmitt, L. Hovestadt, L. Van Gool (Eds.), *Future Cities*, in: *Proceedings of the 28th Conference in Education and Research in Computer Aided Architectural Design in Europe (eCAADe)*, Zurich, 2010, pp. 119-128.
- [6] R. Koolhaas, B. Mau, S. M, L. XL, *The Monacelli Press*, New York, 1995;
- [7] M. Kajima, J. Kuroda, Y. Tsukamoto, *Made in Tokyo*, Kajima, Tokyo, 2001.
- [8] Dai Nippon Printing Co. Ltd. Website, http://www.dnp.co.jp/museum/nmp/madeintokyo_e/map/mapfr.html (accessed Apr. 19, 2012).
- [9] A. Vidler, *The third typology*, *Oppositions* 7 (1976) 1-4.
- [10] G. Goldschmidt, K. Klevitsky, *Graphic Representation as Reconstructive Memory: Stirling's German Museum Projects*, in: G. Goldschmidt, W.L. Porter (Eds.), *Design Representation*, Springer, London, New York, 2004, pp. 37-61.
- [11] G. Goldschmidt, H. Casakin, *Expertise and the use of visual analogy: Implications for design education*, *Design Studies* 20 (2) 153-175.
- [12] K. Shinohara, *Towards architecture*, *Japan Architect* 293 (1981) 15.
- [13] Y. Nussaume, *Critical Anthology of the Japanese Architectural Theory*, Ousia, Brussels, 2004. (in French)
- [14] T. Ito, *Diagram architecture*, *El Croquis* 77 (1996) 18-24.
- [15] B. Rudolfsky, *Architecture without Architects*, MOMA (Museum of Modern Art), New York, 1964.
- [16] G. Confurius, *Editorial*, *Daidalos* 74 (2000) 4-5.
- [17] Fenton, J., *Hybrid Buildings*, Pamphlet Architecture 11, Princeton Architectural Press, New York, 1985.
- [18] P. Virilio, C. Parent, *Architecture Principe*, Les Editions

de l'Imprimeur, Paris, 1967.

- [19] S. Allen, M. McQuade, *Landform Building: Architecture's New Terrain*, Lars Muller, Zurich, 2011.
- [20] R. Koolhaas, *Junk Space*, Content, Taschen, Köln, 2004, pp. 162-171
- [21] R. Koolhaas, *Mutations*, ACTAR, Barcelona and Arc en Rêve Centre d'Architecture, Bordeaux, 2000.
- [22] R. Koolhaas, H.U. Obrist, *Project Japan: Metabolist Talks*, 1st ed., Cologne, Taschen, 2011.
- [23] R. Scoffier, *The Four Fundamental Concepts of Contemporary Architecture*, Norma, Paris, 2011. (in French)