

Transdisciplinarity: A New Generation of Architects and Mediocritas

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ABSTRACT

The discussion about the legitimacy of architecture being an autonomous discipline or a part of an interrelated system of areas of knowledge has been extensively discussed during the Postmodern period as a tendency of searching for meaning outside of the conventional disciplinary boundaries (Hillier & Leaman 1976; Lefavre & Tzonis 1984; Hays 1998; Eisenman 2000; Piotrowski & Robinson 2001; Hays & Kogod 2002; Anderson 2002). This article connects the scenario described by Fraser (2005) and Wigley (Stuart 2011) where architecture needs to be considered in an *expanded field* as consequence of the post-critical period, to the work of a new generation of architects whose interest lies on questions that are peripheral to architecture strictly speaking. The type of architecture that emerges in this scenario is characterised by a proclivity towards other disciplines, including politics, economics and social studies, resulting in a form of design outside of traditional architectural disciplinary boundaries and diluted into a generalised idea. The article presents a series of examples of recent projects and discusses the impact of their approach to architecture, offering a cautionary note. As a conclusion, this paper proposes the notion of *mediocritas* to establish a *right* balance between architecture as an autonomous discipline and its disciplinary dislocation with other cultural fields.

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SHELTERING INTO TRANSDISCIPLINARITY

In November 2005, Murray Fraser provided a defined picture of the challenges left to contemporary architects of the post-critical period when the Critical Architecture conference was held at the Bartlett school of Architecture in London. The special issue of the *Journal of Architecture* dedicated to the proceedings held an introduction by Fraser in which he relates back to the late 1960s and early 1970s when Tafuri presented an *impasse* to future architects (Fraser 2005, 317).

Tafuri argues that capitalist development resulted in the failure of the big ideologies and consequently, architectural design tools were no longer able to cope with the contradictions of society. The architecture of utopia was to be abandoned and architects were left to focus solely on shape, at the expense of more ideological concerns. Amongst others, an exemplary reaction, continues Fraser, has been provided by Bernard Tschumi and Rem Koolhaas who proposed a "method of design that might be hybrid and subversive" (Fraser 2005, 317). Especially from Koolhaas, we witnessed an approach to architecture where the contradictions of global society and late capitalism are not seen as a problem by architects but are instead considered, in virtue of the project, as a possible starting point around which the project may be engineered (Davidson 1995). From this point on, and even more than before, architects are proposed as mediators between the powers that run the city, facilitators of decision and design processes, and promoters of new urban strategies. Fraser explains how the overspill of architecture in other disciplines was inevitable, and that architects like Koolhaas, in foreseeing a lack of commissions, made a radical turn in their work in order to continue as practicing architects without closing themselves in the intellectual niche of architectural criticism. This overspill is thus presented as a necessary radical step to be taken towards other disciplinary fields to respond to ideological, economic, and political instances. However, while admitting the need for architecture to be considered within a larger canvas by contemplating the "different readings and different tactics in different situations" (Fraser 2005, 320) offered by the cultural studies approach, Fraser stresses the importance of combining physical space with the multiplicity of readings: "the crucial thing is to see the architectural and spatial issues in relation to their specific cultural context, operating simultaneously on global and local levels" (Fraser 2005, 320). In essence,

the panorama described by Fraser in 2005 is an open question for any future architects that need to cope with a set of cultural, economic and social aspects which are significantly different from those of their predecessors, namely those who characterised the architectural production from the 1980s to the beginning of the 21st century.

IMPACT OF TRANSDISCIPLINARY IN DESIGN PRODUCTION

During the Post-structuralism and postmodernism period, the work of intellectuals like Derrida, Deleuze or Foucault permeated different fields of knowledge and expertise by using language as the main tool of investigation. In their work, the French *philosophes* treated social and scientific topics with confidence, trusting in the semantic relationships between science and thought. Branko Mitrović (2011) explained the difference between the English definition of philosopher and the French word *philosophe*, where the latter would more accurately be translated as *public intellectual*. The French *philosophes* in the 1970s were more engaged with the public life, the narrative and the rhetorical side of their work, than the logical consistency of their arguments (Mitrović 2011, 144).

Although not really patent during the eighties and nineties, the inaccuracy of this approach has been recently clarified by Alan Sokal and Jean Bricmont in their book *Fashionable Nonsense* (Sokal & Bricmont 1998). The book clearly explains the errors, misunderstandings and inconsistencies that authors like Latour, Deleuze, Baudrillard or Virilio made when discussing notions and theories pertaining to the realm of physics and mathematics in connection to their own cultural studies. Lacan's use of mathematics is particularly revealing in our discussion:

[...] "He (Lacan) excels (if we may use this word) at a second type of abuse: his analogies between psychoanalyses and mathematics are the most arbitrary imaginable, and he gives absolutely no empirical or conceptual justification for them." (Sokal & Bricmont 1998, 36).

More generally with this work, Sokal stresses the importance of expertise and disciplinarity, against a superficial use of notions which belong to specific areas of knowledge. He provides an extensively documented lesson about the difference between discussing arguments of his own expertise and others'. If we apply Sokal's lens on disciplinarity to the heterogeneous approach to architecture, which emerged as a possible solution after Tafuri's *impasse*, a possible danger might surface: namely that language substitutes the contents it was meant to convey. A clear example is provided by the 1996 Sokal Hoax, where a scientific paper argued the political implications of the physical theories of quantum gravity involving gender issues and epistemological questions (Sokal 1996b, 217-252). The journal article presented an argument thoroughly structured on the semantic level, recalling a series of key terms and referring to relevant authors, theories and texts, mostly in the area of post-modern culture. However, although the different parts of the argument are consistent with each other, the text is "liberally salted with nonsense" and crafted in such a way that "it sounded good and it flattered the editors' ideological preconceptions" (Sokal 1996a). Sokal's article illustrates the convincing power of the *form* at the expense of the content, in the context of the transmigration of notions from one discipline to another. Coming back to architecture, it is not difficult to

compare this approach to cultural study and physics with what Tafuri referred to as merely the shape of buildings, which is now left as the only remit for architects. The risk lies in the fact that the project, while supported by a consistent linguistic construct, may be dangerously lacking in true meaning and content. Sokal's moral is that the treatment of topics of others' expertise may lead to the production of superficial, if not misleading, work.

Other examples offer insights on the complexity of the question about discipline boundaries and their overlap. When asked to expound his considerations about the Herzog and De Meuron's Beijing Stadium, the engineer Massimo Majowiecki, concluded that there was too much steel used.

"You will be seeing this one during the upcoming Olympics; it is the Olympic Stadium in Peking. Forty thousand tons of pure steel. Six thousand tons are normally sufficient to build a stadium. Is this total wastage of energy at all worthwhile? Is it really so beautiful?"¹

Majowiecki's consideration of the Beijing Stadium appears to be utterly based on a quantitative measure. This way of seeing a stadium diverges significantly from the one an architect, a politician, or a layman may have. By the same token, it could generally be difficult for a politician or a layman to comment professionally on the structure of a building.

Conversely, we have brilliant examples of non-architects that have discussed or designed buildings which have emerged as relevant case studies. Examples are the Villa Malaparte in Italy, designed in undefined measure by both Adalberto Libera and his client Curzio Malaparte (Talamona 1992), or the Stonborough House in Austria, designed by Ludwig Wittgenstein and Paul Engelmann (Paden 2007; Last 2008). Although trans-disciplinary and cross-boundaries experiments have often occurred in the history of architecture, with fine arts, literature, philosophy and history, mathematics and physics, and, more recently with cinema and new media, there is a growing tendency to involve societal and economic areas into the architectural discourse. The role of the architect in the professional environment is increasingly stirred by new challenges, including economic growth and job creation, social inclusion and quality of life (Zammit 2014), and democratisation of the design process (Busta 2016).

However, between the work of architects such as Team 10 (Risselada & van den Heuvel 2005, Avermaete 2005) or Hertzberger (2005) and the last generation of architects, there is a significant difference. In the work of the former, the social involvement in architecture was directly related to the experimentation of new typologies and spatial organisation (Avermaete 2005). The office mission and the production of the latter seems to suggest that the social, economic and political components are the main focus of the work.

¹ The transcription of the public talk is available at: http://www.beppegrillo.it/eng/immagini/vday_majowiecki_EN.pdf [last accessed: 1st March 2015]

ARCHITECTS IN THE EXPANDED FIELD: JAQUE AND ZUS

In the last couple of decades, European countries have witnessed a boost of architectural construction as a direct consequence of economic policies across the continent. This particular period of recent European architecture is clearly described by Hans Ibelings in his *Supermodernism - Architecture in the Age of Globalisation* (1998). Not only the main European cities have been equipped with new libraries, civic centres, museums, parks, and other public and private buildings, but even the small towns have had their own distinctive and iconic architectures.² As the golden age of construction gradually came to an end in the first decade of the 2000s, there has been increasing attention given to those facets of the architectural discipline that are not directly related to the physical side of architecture such as history, theory or criticisms. Ibelings described this period extensively (Ibelings 2004), illustrating a scenario that, albeit chiefly focused on Dutch architecture, can be applied on a global scale. As a consequence of it, from the 1990s onwards we witness the rise of another type of architect whose main interest appeared to be in the discourse around architecture, rather than in its construction. Jarzombek provides an account of the different stages of this gradual transformation characterised by four main strands: phenomenology, preservation, computation, and history/theory (Jarzombek 1999). The architect interested in the discussion of architecture found a fertile terrain in the contamination of architecture with other disciplines described by Fraser.

Within this scenario, two figures conspicuously represent this new generation of architects and their proclivity to the politics, economic and societal aspects related to architecture. The office ZUS in The Netherlands and Andrés Jaque Architects in Spain.³ ZUS stands for Zones Urbaines Sensibles, and the practice “reclaims the public role of the architect by making social challenges explicit by means of unsolicited architecture and architectural activism”.⁴ The full name of Andrés Jaque’s practice includes: Office for Political Innovation, which is a strong indication of its remit. Their generation comes immediately after the one of Winy Maas and Luis Mansilla, and while the latter have extensively shown us how architecture can produce daring and amazing spaces (Wozoco, Amsterdam 1997) or sophisticated and complex buildings (Musac, León 2004), the former seem not to have followed the steps of their predecessors in that sense. The majority of projects of ZUS and Jaque’s portfolio so far have been dedicated to installations (Jaque’s PHANTOM. Mies as Rendered Society) and contributions to debates about social and political aspects of the city and architecture (von Boxel, et al. 2007). Even in those projects that have a more significant constructional aspect, like the Luchtsingel bridge in Rotterdam (ZUS, 2012) and the Jaque’s Never Never Land House, the primary focus of the designers seems to have been on the participatory side of the project. The case of the

Luchtsingel Bridge in Rotterdam epitomises ZUS’ intention of working with *unsolicited architecture*. With no formal initial client, the project has been supported by the citizens of Rotterdam through a voting campaign, to demonstrate to the municipality and possible investors the importance of the project for the entire city. Jaque’s project Sales Oddity which secured the Silver Lion for the best research project at the Koolhaas’ 14th International Architecture Exhibition of la Biennale di Venezia, illustrates another end of the work of this new generation of architects. The project describes the media campaign that Italian entrepreneur Silvio Berlusconi broadcast in the 1970s as promotional material for his suburban housing development Milano 2. Jaque’s project focuses on what he defines as: “post-WWII national-TV-urbanisms”⁵ a massive selling campaign whose success, among other successful investments, paved the way for Berlusconi to later become a politician. This project shows how the architect’s interest has been geared towards areas of communication, marketing, semiotics, and politics, rather than questions of building typology, urban settlement, infrastructure or architectural composition. Moreover, the fact that this project has been awarded with the Silver Lion at the Biennale is patent evidence of the public and professional recognition that such approaches to architecture gain at this moment.

While Mansilla’s work is utilised as an example of good construction,⁶ Jaque and his work have appeared in several magazines from all over the world, talking about his vision for the city and architecture. This new generation of architects seem to appear in a variety of media from traditional print to newer online channels and biennales, demonstrating their great engagement with the public in a large sense, and epitomising a new possible direction for architects.

DISCUSSION – (THE TRESPASSING)

In his article presenting the work of Andrés Jaque in *Architect* magazine, Christopher Hawthorne (2013) suggests that a possible viable scenario for the future of architects may be characterised by the peripheral discourse in architecture.

This is evinced by the justification given by Wigley for inviting Jaque as visiting professor at Columbia School of Architecture; because “he has fantastic peripheral vision” (Hawthorne 2013). It seems implicit that a possible far-sighted and peripheral vision of the city may somehow cope with a post-crisis condition of economy and society in which architects have possibly some responsibility to overbuilding and the creation of a “false confidence” (Hawthorne 2013). This responsibility would now place the architect in a negative position, bearing a “penance required for the damage done” (Hawthorne 2013).

The role of the architect in the organisation of work of contemporary society will be determined not so much by the professional guild of architects but most probably by the shape that society is going to take in the coming years.

² Casar de Cáceres in Spain (less than 5,000 inhabitants) or Hoofddorp in the Netherlands (73,000 inhabitants) had their own folding bus stop, just to mention two examples. These two projects remain today as the only new architecture in decades.

³ It is worth noting that Jaque has been founded in 2003 and Zus in 2001, whilst the open question and challenge posed by Fraser was in 2005.

⁴ From ZUS official website. Accessed 1 June 2016

⁵ Cf. <http://andresjaque.net/cargadorproyectos.php?variable=44#> [last accessed: 28th November 2016]

⁶ Construction Material Manual (Hagger 2006) employed as first page of the intermediate floors section, p. 162

The architect's own expertise lies in the design and construction of buildings and spaces. In whatever manner the work will be organised in society in the future, this specific expertise is to be mastered by some expert. What architects can decide is what their position will be within this intellectual panorama. The fact that a portion of contemporary architects are committed to other fields through peripheral or expanded visions could generate some concern about who will be in charge of the design and construction aspect of the built environment. The peripheral approach is, in this sense, opposite to the idiosyncrasy which characterises architecture as a defined discipline, which is why from the second half of the twentieth century onwards, many scholars have insisted on the need for the architect to redefine his role in society (Carter 1983, May 1987; Nicol and Pilling 2005; Jarzombek 1999; Doucet and Janssens 2011; Caciuc 2015). In particular, Jarzombek (1999) introduced the notion of disciplinary dislocation as the consequence of the division of the architectural practice into scholarly and intellectual activities on the one side, and the technical and professional practice on the other. Jarzombek traced back the origins of this dislocation to the 1940s and 1950s, where there has been an "infusion of neo-Kantian psychology into architectural discourse" (Jarzombek 1999, 488). Thanks to the work of Rudolf Arnheim and Suzanne Langer a "metadisciplinary horizon" was added to the "introverted theorisations of the Moderns". (Jarzombek 1999, 488)

If architects work in other fields such as economics or politics, or (more common in the past) linguistics, semantics, philosophy or aesthetics, two positions are possible. The first is that architects learn to work on the other disciplines by training themselves or increasing their knowledge *outside* of architecture. In this scenario, the architect will acquire an additional title becoming architect and expert in policies for example. If then the architect operates as politicians, he/she should be regarded as such, losing de facto his/her role as designer.

The second possibility is that the architects will not learn the other discipline. In this case, they will operate in the other field without the required training; and this will reveal the naivety that characterises those who know only the surface of the discipline. Similar to what Sokal described, architects will probably operate in the new field within solid linguistic constructs, of which deep meaning and consequences within the discipline will escape the control of the architect.

This argument entails that a peripheral vision is possible, but it bears some pitfalls if not used in the appropriate measure.

How far can a disciplinary contamination go without losing the respective expertise? And, if the contamination is a necessary approach for architects in order to be able to operate in the current and future society, as pointed out by Wigley and Fraser, how can architects avoid the cultural pitfalls that the trespassing of other disciplines might have in store?

A possible solution may be to introduce in the argument the idea of *right* balance between the architect's own expertise in design and construction, and his insertion into other fields of knowledge. In *De iciarchia*, Leon Battista Alberti introduced the Aristotelian notion of *mediocritas*⁷ (*æqua proportione* or golden mean) in sculptural

architecture as the virtue of not exceeding between two extremes. The notion was related to the idea of beauty both in the nature and arts, as an invisible set of moderate proportions. The right mean was also applied to human behaviour in society, intended as the main rule to guide all societal groups from the family to the state. This cultural and social value was considered paramount for the harmonious development of society. *Mediocritas* is the continuous search for balance, obtained by curbing the excesses to which all humankind leans by nature.

Williams provides an extensive account of Vitruvius' "valorisation of the middle" (Williams 2016, 246) where the architect should not excel or be utterly ignorant of any discipline.

"The architect need not and cannot be a grammarian of the stature of Aristarchus, though he must not be illiterate; [...]; nor a painter like Apelles, though he should not be incompetent as a draftsman; nor a doctor such as Hippocrates, though he should not be entirely ignorant of medicine; nor, indeed, should he be outstanding in any one of the other sciences, though not incompetent in any of them". (Vitruvius (1.1.13) from Williams 2016, 246-7)

The application of the *mediocritas* in the work of architecture can prevent the pitfalls illustrated by Sokal in trespassing the disciplinary boundaries. The trespassing should happen in a conscious way. The architect should be aware at any point of the design process of his/her position with regard to the disciplinary boundaries. It should always be clear to the architect whether a specific step in the design process sits within the discipline of architecture or it is a momentary venture into another domain. The pitfall consists in the architect acting as an expert in a non-architectural discipline, becoming, for example a sociologist, an economist, or a geographer. Sokal is quite explicit in denouncing the consequences of such scenario, where the trespasser is exposed to a loss in authority and credibility. The use of *mediocritas* entails a constant awareness of disciplinary boundaries in any step of the design process. This requires not only the knowledge of the own current positions at each step, but, more importantly, the consciousness of the extremes in any situation. Vitruvius' *mediocritas* advocates trespassing, but requires a continuous positional perception.

However, if the overflow of the architectural discourse into other fields can be prevented by the systematic use of the right mean, it is in the implementation of *mediocritas* that the major difficulty lies for today's architects.

At a stage where architecture, as many other disciplines, is increasingly measured by quantitative parameters, it is difficult to apply such a general notion without the use of numbers. Current generations of architects are digital natives, which means that their understanding of the architectural values is inextricably rooted in the digital culture. The architectural discipline is increasingly considered as something measurable, whereby all the facets of the profession from structures to building performance, and from the spatial layout to the architectural composition, are quantifiable entities. The *mediocritas* is a value which

⁷ The notion of *mediocritas* is present throughout *De Re Aedificatoria*, but in special measure in the *De iciarchia* (1468).

escapes the digital definition, since it requires a human judgment to be made on a case-by-case basis. Being the *mediocritas* by definition a continuous negotiation between extremes, today's architects may find it difficult to use it on a methodical and iterative manner.

In operative terms, the *mediocritas* bears an evolving definition, since its application is strictly related to a series of societal values.⁸ The right balance can be considered as a set of proportions which has its *raison d'être* within society, of which the main parameters are the people who constitute society. If societies are continuously evolving due to the changes in the world economy and politics, we can infer that the notion of *mediocritas* is not to be found in a fixed definition of proportions, but rather in a flexible form (dependent on the series of values set by a certain group of people).

A clarifying example of the application of the principles underpinned by *mediocritas* in architecture can be found in the recent work of French practice Lacaton & Vassal. Tom Vandeputte (2011, 101) explained that the main purpose of the French architects is to design a building that "first and foremost provides a frame for its own inhabitation" (Vandeputte 2011, 102). In projects like the Library in Angoulême (France, 2009), the Maison des Sciences de l'Homme, Saint-Denis (France, 2007), and the Faculty of Architecture in Nantes (France, 2009), the architects provide a flexible structure that allows for multiple changes in shape and configuration, as well as modifications over time. The architecture is a canvas with few fixed points (toilets, entrances, staircases, and structural cores etc.), which provides the inhabitants with freedom of use and change. Unlike the Modern idea of predetermining the use of space in the building with meticulous precision (think of the Frankfurt Kitchen or the Existenzminimum), Lacaton and Vassal involuntarily apply the notion of *mediocritas* by passing the decision on space and its use to the inhabitants, yet retaining a few control points (total square metreage, main circulation, orientation, facades and overall appearance of the building, and its relationship with the city). The users will decide on spatial configuration and programme over the course of the life of the building. The relationship user-building, or, more widely, architect-building-user, is not fixed and finalised by the architects. Conversely, it is characterised by a continuous renegotiation of the use of space, which is dependent on the users, and changes with them. The architecture of *mediocritas* is not static, nor can it be decided or fully controlled by its authors. Any possible precept concerning politics, economics, society or any other field of knowledge included by the architects as driver in the design process would impose a set of rules on the building characterised by a top-down approach to the users. Contra, *mediocritas* requires a continuous balance between the actors involved in the life of the building.

Therefore, the application of the *right mean* within the discipline of architecture requires a continuous formulation of a judgment by the architect, in consideration of the society in which he/she is operating and for whom he/she is building. This should happen in a continuous awareness of the own position within the disciplinary fields, and with

constant reminder of the position that architecture assumes with regard to other fields. The expansion of architecture over other cultural fields is to be guided by a closer consideration of the final users of architecture. In this perspective, the work of the new generation of architects covered here, in their venture outside of the disciplinary boundaries, should concentrate on users, with an awareness of the architect's own limits in working outside of their discipline. The architecture in the *expanded field* should be driven by individual judgment on a case-by-case scenario and focus on people within a conscious disciplinary position, and not by issues chiefly pertaining to the political, economic or social spheres.

REFERENCES

- Anderson, Stanford. 2002. "Quasi-Autonomy in Architecture: The Search for an 'In-Between.'" *Perspecta* 33:30-37. <https://doi.org/10.2307/1567294>
- Avermaete, Tom. 2005. *Another Modern: The post-war architecture and urbanism of Candilis-Josic-Woods*: NAI Publishers.
- Busta, Hallie. 2016. 2016 Pritzker Laureate Alejandro Aravena Makes His Public Housing Designs Open Source. *Architect*. [Last accessed: 21 July 2016].
- Caciuc, Cosmin. 2015. *Transdisciplinarity and theory of architecture*. LAP Lambert Academic Publishing.
- Carter, Donald K. 1983. "A practitioner responds." *The role of the architect in society*: 31-35.
- Craig, Williams A. 2016. "The Rhetoricity of Gender and the Ideal of *Mediocritas* in Vitruvius's *de Architectura*." *Arethusa* 49 (2):227-249. <https://doi.org/10.1353/are.2016.0012>
- Davidson, Cynthia. 1995. *Anyplace*. Edited by Cynthia Davidson. New York: MIT Press.
- Doucet, Isabelle, and Nel Janssens. 2011. *Transdisciplinary knowledge production in architecture and urbanism: Towards Hybrid Modes of Inquiry*. Vol. 11: Springer Science & Business Media. <https://doi.org/10.1007/978-94-007-0104-5>
- Eisenman, Peter. 2000. "Autonomy and the Will to the Critical." *Assemblage* 41:90-91. <https://doi.org/10.2307/3171348>
- Fraser, Murray. 2005. "The cultural context of critical architecture." *The Journal of Architecture* 10 (3):317-322. <https://doi.org/10.1080/13602360500162287>
- Hawthorne, Christopher. November 18, 2013. The Politics of Spanish Architect Andrés Jaque. *Architect*. Last Accessed 1 June 2015
- Hays, K Michael. 1998. *Oppositions reader: selected readings from a journal for ideas and criticism in architecture, 1973-1984*: Princeton Architectural Press. <https://doi.org/10.2307/1567297>
- Hays, K Michael, and Lauren Kogod. 2002. "Twenty Projects at the Boundaries of the Architectural Discipline Examined in Relation to the Historical and Contemporary Debates over Autonomy." *Perspecta* 33:54-71.
- Hegger, Manfred, Volker Auch-Schwelk, Matthias Fuchs, and Thorsten Rosenkranz. 2006. *Construction materials manual*: Walter de Gruyter. <https://doi.org/10.11129/detail.9783034614559>

⁸ The application of the right mean in the Modern period is different from its use in the Postmodernity. Since the social values change, the balance between extremes is also modified consequently.

- Hertzberger, Herman. 2005. *Lessons for students in architecture*. Vol. 1: 010 Publishers.
- Hillier, Bill, and Adrian Leaman. 1976. "Architecture as a discipline." *Journal of Architectural Research*:28-32.
- Ibelings, Hans. 1998. *Supermodernism: Architecture in the age of globalization*: Nai Uitgevers Pub.
- Ibelings, Hans. 2004. "Dutch Architecture at the beginning of the 21st Century. Five Ingredients for a Worst Case Scenario." In *Dutch touch: sulla seconda modernità in Olanda*, edited by Michele Costanzo and Hans Ibelings. Kappa.
- Jarzombek, Mark. 1999. "The disciplinary dislocations of (architectural) history." *Journal of the Society of Architectural Historians* 58 (3):488-493. <https://doi.org/10.2307/991543>
- Last, Nana. 2008. *Wittgenstein's House: Language, Space, & Architecture*: Fordham Univ Press.
- Lynn, Catherine, and Carie Penabad. 2010. *Marion Manley: Miami's First Woman Architect*: University of Georgia Press.
- Marida, Talamona. 1990. *Casa Malaparte*: Clup.
- Martin, Louis, Max Risselada, and Dirk van den Heuvel. 2007. Team 10, 1953–1981: In Search of a Utopia of the Present. JSTOR.
- May, Paul Gerard. 1987. "The architect as communicator: a dialogue of Copley Square." Massachusetts Institute of Technology.
- Mitrović, Branko. 2011. *Philosophy for Architects*: Princeton Architectural Press
- Nicol, David, and Simon Pilling. 2005. *Changing architectural education: Towards a new professionalism*: Taylor & Francis.
- Paden, Roger. 2007. *Mysticism and architecture: Wittgenstein and the meanings of the Palais Stonborough*: Lexington Books.
- Piotrowski, Andrzej, and Julia W Robinson. 2001. *The discipline of architecture*: University of Minnesota Press.
- Sokal, Alan, and Jean Bricmont. 1999. *Fashionable nonsense: Postmodern intellectuals' abuse of science*: Macmillan.
- Sokal, Alan D. 1996a. "A physicist experiments with cultural studies." *Lingua franca* 6 (4):62-64.
- Sokal, Alan D. 1996b. "Transgressing the boundaries: Toward a transformative hermeneutics of quantum gravity." *Social text* (46/47):217-252. <https://doi.org/10.2307/466856>
- Stuart, John A. 2011. "Miami Modern Metropolis: Paradise and Paradox in Midcentury Architecture and Planning; Marion Manley: Miami's First Woman Architect." *Journal of Architectural Education* 65 (1):92-95. <https://doi.org/10.1111/j.1531-314X.2011.01161.x>
- Tzonis, Alexander, and Liane Lefaivre. 1984. "The Question of Autonomy in Architecture." *The Architectural Review* 3.
- Vandeputte, Tom. 2011. "Economy and Excess/Three Recent Projects by Lacaton & Vassal." *Oase-Tijdschrift voor Architectuur* (85):101.
- von Boxel, Elma, and Koreman, Kristian, and Patteeuw, Véronique and Witvoet, Marcel. 2007. *Re-public: Towards a new spatial politics*: NAI Uitgevers/Publishers.
- Zammit, Antoine. 2014. *The Role of The Architectural Profession in Delivering Responsible Design*, Architects' Council of Europe.