Ethics, Emotion, and Aesthetics: Architecture After the Crisis of Modern Science

Alberto Pérez Gómez[1]

[1] McGill University

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Author: Alberto Pérez Gómez

Affiliation: McGill University

Abstract:

Alberto Pérez Gómez first came to prominence as an architectural theorist and historian with his 1983 publication, Architecture and the Crisis of Modern Science; a book that won the Alice Davis Hitchcock Award for distinguished scholarship in architectural history the following year. Having established himself as one of the architecture world's leading thinkers and most original historical theorists, he offered a book that completely broke all norms of either academic or architectural discourse; his 1992 treatise Polyphilo, or, The Dark Forest Revisited: An Erotic Epiphany of Architecture. The author and editor of numerous publications since, in 2007 he co-authored Towards an Ethical Architecture: Issues Within the Work of Gregory Henriquez, a publication "seeking to remind architects of the critical role they play in leading the creation of a community's collective space".

In the first of these seminal texts he illustrated how architecture was profoundly transformed by the scientific revolution of the eighteenth century - and how the consequences of that revolution are still dominant in architectural practice and discourse today. The second investigates architectural 'beauty' through the prism of erotic desire. Described as treading the borders of fiction, theory, and pornography, it epitomizes Pérez-Gómez's desire to reframe architecture as an emotive, corporeal and visceral phenomenon in the context of today's scientific and material society.

Running through these works is a constant argument that blurs the intellectual divisions of modern thinking – whether they be based on drawing a sharp distinction between the role of emotion and logic in architectural design; the part sentiments and feelings play in our use and understanding of the spaces we inhabit; or the divisions that have emerged in aesthetic and ethical theory that see the former as type of theorised formula and the latter as an isolated and fully quantifiable set of social practices. In addressing these issues, he begins this interview-article with comments on the phenomenological underpinnings in this thinking and his interest in both Edmund Husserl and Maurice Merleau-Ponty.

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Author: Alberto Pérez Gómez

Interviewer / author – Graham Cairns
Research – Rachel Isaac-Menard

Collage of three book covers by Alberto Pérez Gómez

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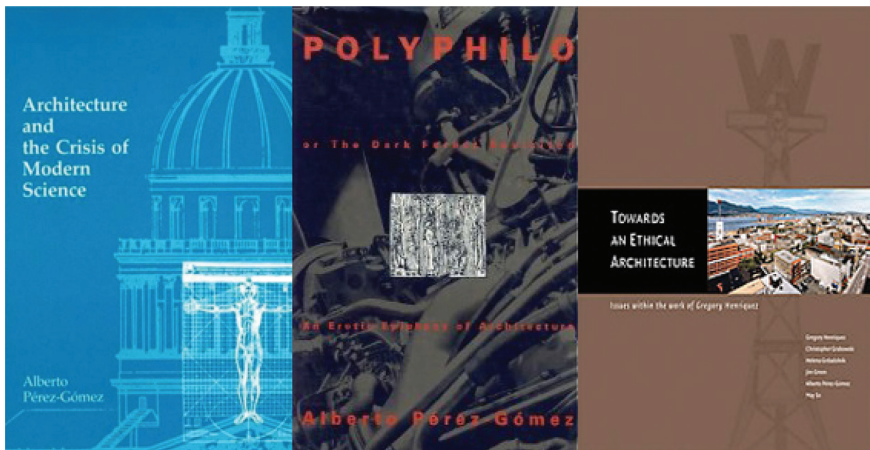
The title of *Architecture and the Crisis of Modern Science* recalls Husserl. However, many of the undercurrents in my own writings on architecture owe much to Merleau-Ponty. Although there is a generally accepted distinction between the phenomenonology of Husserl and Merleau-Ponty, that revolves around a distinction between a philosophy understood through the mind and another understood through the body, I would suggest that the ideas of these two thinkers are not mutually exclusive.[1]

As the later writings of Husserl have been unearthed, and subsequently published, the connections between his later philosophy and Merleau-Ponty's arguments have become a little more evident.[2] They reveal that Husserl did not stop his examination and understanding of consciousness in the mind, but that he was also considering embodiment very seriously toward the end of his life. In this light, one has to accept that there are more connections than one used to imagine between these two thinkers.

Indeed, it is very interesting at the moment that the neurosciences and the cognitive sciences are catching up with this notion of fusion between the mind and the body. There are philosophers and numerous scientists doing extremely important and fascinating work in this field. One is Evan Thompson; a philosopher interested in the idea of the 'mind in the body.' He looks at the problem of neurobiology in relation to Husserl and proposes a number of significant ideas. Most importantly, he is trying to reconcile what one can learn from the brain and consciousness through neuroscience.[3]

Another interesting figure is Antonio Damasio, a neurobiologist teaching in the United States. In the 1990s Damasio wrote a book called *Descartes' Error* in which he demonstrates how emotions, rather than merely getting in the way, play a role in rationality.[4] Another North American cognitive scientist of note in this sense is Alva Noë who wrote *Action in Perception* in 2004.[5] In this text Noë suggests that perception is a holistic concept involving the body and not just the mind.

Another of Noë's books is *Out of Our Heads*. It treads similar ground.[6] It is about the idea that consciousness doesn't reside exclusively in the brain, but in the conscious body and in the world as well. These ideas are not the pipe dreams of philosophers, they are neurological fact. Science and philosophy are intermingling in this regard; they are catching up with each other. The implications for our understanding of experience, and therefore our experience of architecture, are potentially important.

> In *Architecture and the Crisis of Modern Science*, Alberto Pérez Gómez identifies the end of eighteenth century and the beginning of the nineteenth century as a key period in the development of Western Society generally, and architecture more specifically. It is during this period, he suggests, that we find the origins of its current crisis; its failure to appreciate architecture as an emotive, physical experience as well as a material question of construction and functionality. It is in this regard that Husserl's phenomenology, and his pinpointing of the early nineteenth century, becomes central. Here, he expands on that moment and what it involved scientifically and architecturally.

These shifts in science, philosophy, architecture and of course society more generally, all have deep roots. Philosophically, we can trace them all the way back to Plato, and indeed some philosophers do. However, I agree in general terms with Husserl when he says that a major shift occurred at the beginning of the nineteenth century when the sciences became convinced about their autonomy; when they saw themselves as separated from our experience of the world.[7] It was at this time that they could become specialised and they could develop their own syntaxes. It was this historical moment in which they could pretend to be driven by positive reason alone, and they ceased to acknowledge any connection with lived experience.[8]

Husserl is very interesting not only for his arguments on this shift in the sciences and their social setting generally, he is interesting from a more specifically architectural perspective in that he looks particularly at the problem of how geometry changes. He examines that moment at the beginning of the nineteenth century when, after having been Euclidean for centuries, for millennia, the possibility of truly questioning Euclid's ideas really emerges.

In a sense, Euclid's premise was that our understanding of geometry really starts with lived experience; from our tactile engagement with the world and our physically based understanding that, for example, parallel lines do not meet.[9] In the new geometries everything can be constructed visually through

projective geometry. This ability to abstractly engage with geometry opens up the possibility of inverting the premise. For example, it can start with the assumption that every system of lines converges at a point in infinity, and can thus make infinity supposedly 'real.' It privileges the intellectual, the mental, or indeed the image, over the tactile.[10]

Husserl sees this creation of a self-referential system of thought as a big shift. I suggest that it represented a significant shift in architecture as well. We certainly start to see it in Perrault (late seventeenth century) but it is really Durand who, in the beginning of the nineteenth century constructs, an architectural theory that is instrumental and similarly self-referential. His system completely cuts its links with metaphysics and philosophy. He turns the discipline of architecture into a 'methodology for making'.[11]

The roots of these shifts in science, philosophy and architecture are of course even deeper rooted. We can certainly trace back their arguments to the late seventeenth century but it is really in the nineteenth that the definitive and noticeable break is made. This is when the origins of the crisis of modern architecture are fully established; in a society that moves from valuing experience to one that values scientific thought above all else. Modern architecture and particularly its obsessions with function and gratuitous form can be traced back to this moment.

> Although here Alberto Pérez Gómez focuses on the roots of the "crisis of modern architecture" in terms of the domination of scientific thought as an autonomous discipline, his writings have continually made reference to a form of counter narrative; occasional thinkers, philosophers, scientists, artists and architects that have broken this out of this lineage. In this counter narrative one finds names such as Piranesi, Boullée, Ledoux and, more recently, Fredrick Kiesler, Steven Holl and Daniel Libeskind. In discussing these, he brings into his arguments the ideas of a whole range of other figures whose theories resonate with the arguments he has put forward in various ways.[12]

There is a form of counter-narrative of course that does not totally reject the scientific, but nuances it with more intuitive arguments. I would argue that it also has roots in the same historical moment and society; the split in European culture evident at the end of eighteenth century. The Romantic philosophers are important in this regard - although we must bear in mind that the term 'romantic' is problematic. We are not talking about 'Romanticism' which we can define in basic terms as an anti-rationalism, we are concerned with the philosophical thinking of the period.

These philosophers did not discard reason totally by any means. On the contrary, they took the possibility of understanding reason through words, through metaphor and emotion, very seriously. However, in doing so they basically established a counterpoint to Positivism by imagining the sciences as holistic. It was a concept already in evidence in the thinking of philosophers such as Friedrich Schiller[13] and Friedrich Schelling.[14]

These thinkers, as with other philosophers of the Romantic period, were already articulating this holistic, experience based understanding that would later be taken up by phenomenology. In a sense, it would also evidence itself in Heidegger and some of his students; in scholars like Ernesto Grassi. Grassi basically valorises a line of philosophy that, as with the Romantic philosophers, comes from the practical philosophy of Aristotle, evolves in Renaissance Humanism, passes through the figure of Vico and continues into early modernity through Wilhelm Dilthey, Friedrich Schleiermacher and then eventually Heidegger himself.[15]

Subsequently, one can place Hans-Georg Gadamer[16] in this same tradition, and more recently the ideas Dalibor Vesely, my own writings and, extending even further and directly into architecture, the early work of Daniel Libeskind. So the scientific discourse outlined in *Architecture and the Crisis of Modern Science* is not only paralleled by an alternative discourse, it is an alternative discourse that had similarly been prepared and developed over time. It did not come out of a vacuum.

These are of course just two strands of a more complex historical narrative. More generally, architecture and the philosophical arguments that relate to it, form part of a longer and broader philosophical argument. This is the reason why it is impossible to consider architecture in isolation. It is embedded in this broader narrative that is always in part philosophical and scientific.

In introducing the work of Dalibor Vesely into his arguments here Pérez Gómez references his own tutor and a thinker for whom the question of representation is central to understanding the historical trajectory architecture has taken since the Renaissance. Vesely's book, *Architecture in the Age of Divided Representation*, is in many ways, a variation on some themes Pérez Gómez has dealt with himself.[17] In his introduction to the *Ordonnance for the Five Kinds of Columns* for example, Pérez Gómez describes Perrault's tendency to use plans and sections as reductive projections, rejecting the tradition of perspectival optical adjustment that had always mediated between drawings and buildings. This he sees as indicative of the role representation was to play in the emergence of the 'crisis of modern architecture.'[18] He explains:

Prior to Perrault, and later Durand, it is possible to consider architectural representation, what we may more specifically call drawings, in a very different way to what would become typical subsequently. During the Renaissance for example the drawings produced by people like Alberti were like adumbrations or suggestions. They had to be translated into building. They were never literally reductions of the buildings to come.[19]

The translation was necessary, and even celebrated. Filarete (Antonio Averlino) speaks about this in his fifteenth century *Libro d'architettura*. He suggests that it is expected from its conception to its realisation, a building will change; that there is a potentially enriching process involved in turning the drawing into a physical structure, like a seed turns into a tree. In this regard,

the drawing is not a one-to-one notation of the intended reality. As a result, the drawing was never, could never be, the work itself. The work was seen more as a performance. In that regard, it was very much like music. It is not Filarete however, but rather Alberti, who talks about it in terms of music.

Lydia Goehr has written about a similar issue concerning music in recent years.[20] She argues that before Beethoven, the work existed only as performance. She argues that Bach never imagined that the score was the work. The piece of music was "functional," its function revolved around the fact that it was made for a particular place, for a particular event, for a particular client and at a particular time. I would suggest that architecture also performed like this, and that this was more explicitly understood and accepted in the past.

The role the architectural drawing has today, as a precise working drawing that 'predicts' the building to come, is one that starts to crystallize with Perrault and matures with Durand. This is true even in the case of perspective. The argument can be made of course that perspective drawing does 'predict' the building to come. Here too however, there is something else going on. For Renaissance architects perspective was interesting for ontological reasons; it was a poetic image that was not just 'naturalistic,' but which connected with a higher reality - with the 'mind of God' manifested mainly through the geometry of light.[21]

It is very misleading to think that representation had the same status that it has for us today. Architects knew very well that perspective was not an architectural idea, even in the early seventeenth century when Andrea Pozzo, amongst others, began to relate the perspective image directly to the plan and elevation through projection techniques.[22] In this projection of the perspective image from plan and elevation a one-to-one relationship could begin to emerge. However, it is a modern mind-set that sees it as a drawing that predicts the final building; as a pre-set mathematical formula. It could emerge in this guise after Perrault, except for the fact that eighteenth century architects (and philosophers) were generally uninterested in geometry and the issues raised by perspective. In the early nineteenth century perspective was "rediscovered" and further "refined" to account for the concept of optical vision (as an image imprinted on the retina). I discuss these issues in *Architectural Representation and the Perspective Hinge.*"[23]

Claude Perrualt is a figure that Pérez Gómez has dealt with in various guises. He is the pivotal figure in the arguments laid out in *Architecture and the Crisis of Modern Science* and, more specifically, is the author of *Ordonnance for the Five Kinds of Columns After the Method of the Ancients*; the historical text for which Pérez Gómez wrote the introduction in its 1993 English translation. In this introduction, he identifies that Perrault justified his alterations to the architectural orders through historical references to changes made in the past.[24] Questioned on such applications of historical precedent to the practice of architecture today Pérez Gómez opens the debate to parallel questions about the application of theory to practice; both historically and today.

Perrault was not only using historical precedent in this regard, he was referencing architectural theory in a sense. Both are key to contemporary architecture, but not in a prescriptive or necessarily direct way. Vitruvius is very clear that you need two things to do architecture. You need theory, which for him is the liberal arts that allow you to understand the structure of the universe, but you also need practical knowledge. The first is a form of top-down knowledge that makes it contemplative knowledge. The second is of two kinds, technical and "phronetic" (connected to *phronesis* Gr., meaning prudence or wisdom). Technical knowledge comes from the bottom-up. It comes from the passing on building skills, while "phronetic" knowledge is transmitted through stories. These stories would give architects and builders a personal understanding of norms based both on nature and culture, such as when and why to use the Doric order for example.

For Vitruvius you need all of these (which are in fact the three forms of knowledge originally identified by Aristotle). The understanding of the universe that comes from the philosophers in order to understand that there is order in the heavens is needed to create significant cities and buildings that "reflect" this order for humans, but you also need another kind of knowledge that comes from the craft of architecture or building. The one does not reduce the other and they are not prescriptive. Indeed, "theory" is never prescriptive until Perrault. Perrault, for the first time, has this obsession with simplifying the rules of the Orders because he wants them applied in practice. Claiming there is no cosmic connection in architecture he retains a mathematical theory that can be instrumentally applied, and historical, "phronetic" knowledge (which he associates with cultural customs), and that he foregrounds as primary.[25]

Already thinking in the wake of Galileo and Descartes, Perrault could no longer understand Vitruvius. The Roman architect had claimed that the central talent of the architect is *solertia*; the cunning intelligence that allows the architect to understand the perfection of proportions (though *theoria*), but also to understand that you cannot build without a full understanding of the site and the program.[26] Consequently, for Vitruvius, these theoretical ideas were not prescriptive and should not be prescriptive. They were intended to be adapted in negotiation with practice.

The misunderstanding of the classical concept of theory is evident in Perrault but again it is Durand who radically shifts the terms, questioning the legitimacy of both *phronesis* as story. In Durand's functionalism the architect is not supposed to be concerned with meaning since a building's form simply follows a logical operation of space planning; "natural language" and its interest in expression would have no role to play in architectural creation. In addition however, he also questioned the value of technical knowledge "from below". For him, the architect should be in a position to dictate the building operation thoroughly, bypassing the traditional knowledge of the trades. The "theory" Durand proposes is basically applied science, necessarily excluding the traditional philosophical questions that were part of that discourse.

While historians usually consider Durand's work in the lineage of architectural theory, in reality his contribution is totally at odds with the tradition. His "theory" is applied science and its only justification is that it works efficiently. From that moment onwards the relevance of theory in architectural practice becomes very confused because we expect theory to have a direct and efficient application to practice. Even today, the confusion emerges regularly. Parametric thinkers such as Ben Van Berkel for example seem to have regularly shown the same obsession.[27] In lectures he has claimed "to have collapsed theory into practice." In this context, theory becomes an equation and, as such, fully integrated into practice; a complete inversion of *solertia*.

> The argument that architectural theory can, and perhaps should exist in a form that maintains a certain independence from practice, is not only a theme that runs through the work of Pérez Gomez, it informs his approach to architectural writing itself. In one sense it emerges in his insistence on discussing notions that are traditionally seen as alien to academic or architectural discourse; love, eroticism and pathos. It is also seen in his use of narrative as a literary form through which to engage with architecture. The first of these issues is most evident in his 2008 book *Built upon Love: Architectural Longing after Ethics and Aesthetics* which examines the historical role of *eros* and *philia* in the making of architecture.[28] The second issue is most famously evident in his 1992 text *Polyphilo, or, The Dark Forest Revisited: An Erotic Epiphany of Architecture*.[29] He expands on these writing styles and themes thus:

Arguably modern and contemporary architects focus excessively on visual images and disregard what Paul Ricoeur has qualified as the linguistic origins of the imagination.[30] Recently Elaine Scarry has demonstrated how literature produces far more vivid images (connected to the full sensuous presence of embodied perception) than say, the mental images we may hold of a person or a scene as we close our eyes. This observation alone throws into question much of what we take for granted in architectural representation.[31]

More specifically in the case of *Polyphilo*, architectural theory in narrative form, with its emphasis on the fundamental erotic dimension of human space, flaunts prescription. You cannot turn a text like that into a methodology. *Polyphilo* is of course based on *Hypnerotomachia Poliphili*, (Venice,1499), which is an exceptional humanist text.[32] *Hypnerotomachia* is fundamentally an allegory for Marsilio Ficino's Neoplatonic and Christian philosophy.[33] It is about how you can elevate the soul through images, both visual and literary. Consequently, when we discuss this text we are not strictly speaking about a treatise on architecture, although the hero learns and is 'enlightened' as he is exposed to architecture.

There are other narrative tendencies in the history of architectural writing that are more directly related to standard architectural discourses. Calvino's *Invisible Cities* is just one.[34] And there is also a lineage of 'architectural narrative' in Vitruvius and other Renaissance writers (the *phronetic* knowledge to

which I alluded before). If you read Alberti, for example, he is actually full of anecdotes. The problem is that we only tend to focus on the discursive and analytic aspects of his work. Our modern sensibilities tend to see only the rational structure behind the narrative or anecdotal construction.

With regard to theme, a book like *Polyphilo* is unusual to an extent, but not totally. As a way of describing human (cultural and architectural) space as erotic space it also has a history in literature - think, for example, of *Daphnis and Chloe*.[35] In *Polyphilo* the "way of the architect" is characterized as a "vita voluptuaria'" in distinction to the traditional division between "vita activa" (a life of mostly unreflective action --craft or technical knowledge-- with its usual rewards and disillusions) and "vita contemplativa" (a contemplative life --theoretical knowledge from the liberal arts-- or in Christian terms a life of renunciation and asceticism). Polyphilo, the architect, must be 'concupiscent,' a weird word today used mainly to describe pleasures of the flesh, but which in *Hypnerotomachia* refers to the way in which the soul was always embodied. Seen thus, architecture can propitiate the good life and reveal an appropriate social order through its powers of emotional seduction. It is not simply a sign or an intellectual discourse, though it opens up a space of philosophical reflection; it is fundamentally material and speaks to the living body.

In this connection Ficino says there are different kinds of love; there is love for knowledge, love for beauty and also a love for food, for sex etc. For him, they are all connected; they are of a piece. Whilst the spiritual may be preferable, the others are not to be condemned. So there's a very different understanding of the notion of love and the erotic. It was far more ambiguous and interrelated than we tend to conceive today. In the seventeenth century La Rochefoucauld said it more clearly: "There is only one kind of love but there are a thousand different copies," a concept now corroborated by neuroscientists like Semir Zeki.[36] This is key to the arguments I put forward in *Built Upon Love*.[37] To bring about an architecture that might be both beautiful and just, responsive to cultural contexts and genuinely creative, the architect must recognize his or her medium is the space of desire. Thus architecture can inspire emotion and induce pathos, being both compassionate and erotic.

This separation and eventual opposition between reason and emotion is something that has its philosophical roots in Descartes and in his disassociation of the human mind and body. In the context of architecture it refers to reason as a rationally responsible building practice, an intellectual formalism and an understanding of architecture as "information", whether politics or propaganda, and emotion as an emotionally charged architecture, or architecture as "art". It is a separation that the Reformation and Catholic Counterreformation also contributed to – by way of the concept of the body as the cause of sin. Thus, for modernity, the body becomes a problem - getting in the way of clear "legitimate" knowledge and salvation, rather than being its vehicle. As a consequence, meaning in architecture was construed more intellectually. Architecture is not intended to induce emotion, it is something that communicates rationally; through a visual language that is controlled and read

- most obviously through symbols. Reading symbols becomes a sort of discourse and architecture ceases to move us emotionally in the same diffuse way.

The argument I make, and that can now be made through neurobiology, is that to pull these things apart is to misconstrue the nature of human consciousness. Emotional experience has been shown by Damasio to be fundamental to clear thinking and to the discernment of good choices for oneself and others as one imagines the future (planning). Yet we usually focus on the intellectual reading of architecture and disregard the emotional. When Eisenman talks about architecture through Derrida, the emotion of our response to architecture is completely ignored.[38]

This is part of the problem with post-structuralism as applied to architecture; it misconstrues experience as being in a point that doesn't exist; as focused in a particular act of reading. By contrast, phenomenology would argue the architectural experience is one of 'presence' and that this presence is thick; that it has layered dimensions.[39] This is possible because the present itself has "dimensions" - it is not merely an evanescent "point" between past and future. Again this phenomenological temporality of experience, first thoroughly described by Husserl and Merleau-Ponty, has been substantiated through neurobiological studies (in particular the work of Thompson).[40] That is, in short, why I write about love, because architecture is about emotion.

> The need to understand architecture in terms of an emotional phenomenon is perhaps the central principle that underlies the theory of Alberto Pérez Gomez. His *Architecture and the Crisis of Modern Science* is a historical examination of its gradual erosion as an architectural principle, whilst *Built Upon Love* is an explicit argument that places emotion at the heart of architecture and its experience. Although his references to contemporary architects in this regard are limited, in this second book he identifies the work of Frederik Kiesler and Daniel Libeskind, as contemporary architects that have produced 'emotive architecture.' This is particularly pertinent in the context of Kiesler's *Shrine of the Book* project in Israel[41] and Libeskind's *Jewish Museum* in Berlin.[42] Both buildings are resonant with metaphor, in part, due to the architectural program. Questioned on whether more 'standard' architectural programs can elicit similarly emotive responses from their designers he offers the following comments.

The architect has the obligation to work within certain parameters, but at the same time also has the ability to negotiate with the powers that be. In this sense, there is normally some scope for the architect to modify the program and, at times, to communicate emotional and ethical values. Daniel Libeskind's early work was very interesting in this regard. It was also brilliant from a more purely architectural design perspective. The Jewish Museum in Berlin was the result of complex political negotiations that allowed him to transform a relatively small extension to the German Museum into what it is now, the Jewish Museum; an architectural icon and a symbol of the Jewish massacre and Germany's response to the darkest moment of its own history.

The decision to make it into the Jewish Museum was a huge political shift and it is a very unique project in that way. Libeskind managed to give himself enough leeway in the design process to charge the program with this emotive content; to give himself enough room for the project to speak metaphorically, embodying both memory and a potential healing. This sort of insight on the part of architects is rare but not unique. Another marvellous example is the monastery of La Tourette by Le Corbusier from the 1950s.[43]

La Tourette is supposed to be a Dominican monastery but it really has very little to do with Catholicism. It rather speaks of an ecumenical (pantheistic) spirituality that may emerge from the bottom-up, from within our own experience, without theological presuppositions. Corbusier was very clever in his presentation of the project and the head of the Dominican order backed him wholeheartedly. As a result, he got total freedom and was able to construct an incredibly emotive building that often reverses the traditional expectations of a Catholic monastery. These may be isolated cases, but they do reveal that regardless of the political situation the architect is working in, it is sometimes possible to manoeuvre and produce something with metaphoric and emotive power. Driven by wider interests (one could argue by the true "common good") such projects come from a broad understanding of culture and result in a critique of important aspects of modernity - a combination of the poetic and the critical is, in passing, Octavio Paz's definition of a true work of art for modernity.[44]

A less celebrated and less formally innovative example can be found where I live, in Canada - although it is a project that has a less poetic, and predominantly ethical dimension, than those just mentioned. *Bruce Eriksen Place* is a mixed use development in the Downtown Lower East Side of Vancouver, the poorest neighborhood in Canada. The architect was Gregory Henriquez and he turned a seemingly unpromising project into a major ethical success with notable emotive and aesthetic moments. The area concerned had incredible social problems; drug abuse and high levels of single parents, unemployment etc. Henriquez worked closely with a developer who was also interested in producing an ethical project. Together, they involved one of the universities in the region, various commercial players, the provincial government and a couple of NGOs; one helping single parent families and the other dealing with drug users. The area has the only free injection site in Canada which regrettably the present Conservative government of Canada has been unsuccessfully trying to close. It is something I discuss in *Towards an Ethical Architecture: Issues Within the Work of Gregory Henriquez.*[45]

The project includes a unit for people with drug problems and mental health issues, and a tower for low income families and single parents. In addition, they constructed a huge market price condominium which, despite its expense, sold in one afternoon. One of the universities located an entire school of performing arts there too. In addition, it has commercial space on the ground floor and a public atrium space. The problem with such projects is that they normally lead to gentrification. However, right from the beginning these architects were

working ethically to avoid this. Aesthetically it has some remarkable moments, particularly in the public spaces. While very simple formally it also carries great emotive power.[46]

> In discussing the question of ethics and poetics in his description of this project, Pérez Gómez recalls a conference he co-organised at the McGill University in 2007; *Reconciling Ethics and Poetics in Architecture*.[47] It is a question that he also dealt with in an essay entitled *Architecture and Public Space* in the 2009 book *Rights of Way*.[48] In that essay he mentions the work of Richard Sennett and, in particular, his arguments in support of people appropriating spaces in ways not intended for by the architect.[49] He also identifies that artists do this and has mentioned the Situationists as perfect examples.[50] Questioned on the notion of active public engagement in architecture and, in particular, the architecture of public space he discusses a range of issues that lead into, what for him should be the combined realms of theatre, poetry, history, art and commercial culture.

Without participation you not only have no public space; you have no work of art. This is a condition that Gadamer speaks about very clearly in *The Relevance of the Beautiful*.[51] Gadamer questions the philosophical aesthetics that emerged in the eighteenth century that we sometimes still take for granted when thinking about art. During that period the idea emerged that you could somehow subject questions of beauty and taste to rational judgment which of course is futile.[52] To discuss questions of beauty you have to come from the bottom-up again; to discuss stories, to discuss taste through *phronēsis*.[53]

Through this argument Gadamer questions the idea of the aesthetic as something distinct from experience. He argues that unless there is participation and recognition on the part of the spectator or inhabitant, there is no meaning. Artistic meaning is therefore both the experience of something new, and even destabilizing, along with the simultaneous recognition of the experience as familiar. But this is not exclusively a question of physical participation; a physical use and appropriation of a given space. Participation in our engagement with architecture is also emotional and in this sense it is akin to ideas found in theatre; in the work and writings of Peter Brook and Antonin Artaud for example.[54]

Theatre is a useful vehicle for understanding this, and specifically for understanding the relationship between a physical participation occurring in a physical space and an emotional one, which can be simultaneous but not actually involve literal bodily action. The Ancient Greeks clearly understood that the theatre (a space for contemplation) and the agora (the space of action through speech) were connected, even though their modes of participation were different. We may not physically partake in theatre as we do in the agora, but there is 'participation' – it is just of a different kind.

A political space like the agora today is very different however. The way political spaces or buildings are understood by citizens tends to have little to do with participation of any kind. If applied to how a political space, say a

parliament, is understood, it becomes a question of the visual and has nothing to do with participation. To return to Gadamer, it is not 'public' space. Today, this is ever more the case because, although architecture has always communicated on many different levels one of which has been symbolic, we tend to read meaning through the *sign*.[55]

The general public will more easily read the logo of Coca Cola as 'meaning' Coca Cola than they would a more indirect symbolic form. Symbols are like metaphor; they are very fluid and generally the public doesn't like that. Symbols are slippery and more open to various readings. Today it is the commercial sign that predominates. This is a modern condition and architecture responds to it.[56] It is one of the reasons why architecture can be "communicative," but not emotionally engaging. It is one of the characteristics of the modern condition that I believe architecture needs to avoid if it is to recapture the poetic and the emotive.

The philosopher Jean-Luc Marion has explained this somewhat differently: he argues that appropriate artistic expression in our times should function more like an "icon" than an "idol." He is using these terms metaphorically from the tradition of religious representation. While the "idol" portrays a particular meaning, the "icon" (especially in Orthodox Christianity), does not represent "a meaning" i.e., the face of God, but rather allows us to see "through" to meaning (in that case, the Neo-Platonic "luminous darkness."). The confusion in our culture as to the distinction between these things, and our need for simple communicative clarity, echoes the divisions in the intellectual and emotive understanding of architecture discussed earlier. It is another example of how we separate theory from practice, form from experience and aesthetics and ethics – a separation I have continually argued against.

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[1] In underlining this distinction, Pérez Gómez is highlighting one of the central arguments to run through the history of Phenomenology. See: Michael Hammond, Jane Howarth, and Russell Keat, *Understanding Phenomenology* (Oxford, England: Basil Blackwell, 1991).

[2] This identification of Merleau-Ponty with a 'phenomenology of the body' is a reference to the approach laid out in his most important work originally published in 1945: Maurice Merleau-Ponty, *The Phenomenology of Perception* (London: Routledge and Keagan Paul, 1962). The reference to Husserl refers to his ideas on phenomenology, first laid out clearly in 1913: Edward Husserl, *General Introduction to Pure Phenomenology*, trans. F. Kersten (The Hague: M. Nijhoff, 1982).

[3] Evan Thompson, *Mind in Life: Biology, Phenomenology, and the Sciences of Mind* (New Jersey: Harvard University Press, 2007).

[4] Antonio Damasio, *Descartes' Error: Emotion, Reason, and the Human Brain* (New York: Putnam Publishing, 1994).

[5] Alva Noë, *Action in Perception* (Cambridge, Mass.: Massachusetts: MIT Press, 2004).

[6] Alva Noë, *Out of Our Heads: Why You Are Not Your Brain, and Other Lessons from the Biology of Consciousness* (New York: Hill and Wang, 2010).

[7] This argument of Husserl's is most famously dealt with in his unfinished 1936 text: *The Crisis of European Sciences and Transcendental Phenomenology: An Introduction to Phenomenological Philosophy,* 2nd edition (Evanston: Northwestern University Press, 1970).

[8] This is the central argument found in: Alberto Pérez Gómez, *Architecture and the Crisis of Modern Science* (Cambridge, Mass.: MIT Press, 1983).

[9] The texts written on Euclid that cover these issues are numerous. A sample includes: Estelle Allen DeLacy, *Euclid and Geometry* (New York: Franklin Watts, 1963); Constance Reid, *A Long Way from Euclid* (New York: Crowell, 1963); Ian Mueller, *Philosophy of Mathematics and Deductive Structure in Euclid's Elements* (Cambridge: MIT Press, 1981); Leonard Mlodinow, *Euclid's Window: The Story of Geometry from Parallel Lines to Hyperspace* (New York: Free Press, 2002).

[10] The most fundamental and basic distinction between Euclidian geometries and Non Non-Euclidean geometries is their deviation from Euclid's Fifth Postulate: the parallel Postulate. The two basic non-Euclidian forms are Hyperbolic Geometry and Elliptic Geometry. Others are sometimes defined as Kinematic Geometries. A basic explanation is found in Harold Eichholtz Wolfe's introductory text originally published in 1945: *Introduction to Non-Euclidean Geometry,* 5th edition (London: Mill Press, 2007).

[11] Pérez Gómez, *Architecture and the Crisis of Modern Science*, 298-312.

[12] In *Architecture and the Crisis of Modern Science* (159), Pérez Gómez discusses Boullée in these terms. In *Built Upon Love* he describes both Fredrick Kiesler and Daniel Libeskind in these terms. Alberto Pérez Gómez, *Built Upon Love – Architectural Longing after Ethics and Aesthetics* Cambridge, Mass.: MIT Press, 2006),104-106.

[13] Johann Christoph Friedrich von Schiller (1759 – 1805) produced works of drama, poetry and philosophical study. Two texts on the aesthetic experience include: "Vom Erhabenen", 1793 and "Über das Erhabene", 1801.

[14] Friedrich Wilhelm Joseph Schelling (1775 –1854) is best known for his elaboration of *Naturphilosophie* and its attempt to comprehend nature from a philosophical perspective. As a result, it was criticised from a purely scientific point of view as speculative and metaphysical. His mature works include: *New Deduction of Natural Law*, 1797; *Ideas Concerning a Philosophy of Nature*; 1797, *System of Transcendental Idealism*,1800.

[15] Ernesto Grassi's principle argument revolves around the idea that rational thought is directly related to the metaphorical power of the word. He references Giambattista Vico (1668–1744) as key in this regard and underlines Vico's understanding of imagination and the sense of human ingenuity contained in metaphor. See: Ernesto Grassi, *Rhetoric as Philosophy: The Humanist Tradition*, 3rd edition (Illinois: Southern Illinois University Press, 2001).

[16] Hans-Georg Gadamer's principal text, *Truth and Method*, was first published in 1960 and is premised on the argument that objectivity is an impossible state and that meaning and under-standing are actually formed through the more fluid and changeable notion of 'intersubjective communication.' Hans-Georg Gadamer, *Truth and Method* (New York: Grossmond Publishers, 1985).

[17] Dalibor Vesely, *Architecture in the Age of Divided Representation: The Question of Creativity in the Shadow of Production* (Massachusetts: MIT Press, 2004).

[18] Alberto Pérez Gómez, introduction to *Ordonnance for the Five Kinds of Columns After the Method of the Ancients*. Claude Perrault. trans. Indra Kagis McEwen (Santa Monica: The Getty Center, 1993).

[19] These ideas have been covered by Pérez Gómez in a book co-authored with Louise Pelletier: *Architectural Representation and the Perspective Hinge* (Massachusetts: The MIT Press, 2000).

[20] Lydia Goehr is Professor of Philosophy at Columbia University. Her works include: *The Imaginary Museum of Musical Works: An Essay in the Philosophy of Music*, 2007; *The Quest for Voice: Music, Politics, and the Limits of Philosophy*, 2008; *Elective Affinities: Musical Essays on the History of Aesthetic Theory*, 2011.

[21] The role of perspective as a representation of the spiritual or philosophical was most famously laid out by Panofsky in his 1927 publication, *Perspective as Symbolic Form*. Erwin Panofsky, *Perspective as Symbolic Form* (New York: Zone Books, 1996). More recently, these arguments

have been extended. See: Hubert Damisch, *The Origin of Perspective* (Cambridge, Mass.: MIT Press, 1995).

[22] Andrea Pozzo (1642 –1709) Italian painter and architect. Pozzo was renowned for frescos and the illusionist technique of 'quadrata'. He most famous work is the nave ceiling of the Church of Saint Ignacio, Rome. See: Andrea Pozzo, *Perspective in Architecture and Painting: An Unabridged Reprint of the English-and-Latin Edition of the 1693 "Perspectiva Pictorum Et Architectorum"* (London: Dover Publications, 1989). Pérez Gómez discusses him in: *Architecture and the Crisis of Modern Science*, 104.

[23] Alberto Pérez Gómez and Louise Pelletier, *Architectural Representation and the Perspective Hinge* (Cambridge, Mass.: MIT Press, 1997).

[24] Pérez Gómez, *Introduction to Ordonnance*, 65.

[25] Ibid., 16

[26] Solertia can be defined as "being decisive while being level headed under pressure".

[27] The Dutch architect Ben van Berkel has co-authored numerous books. The text that deals most directly with the ideas laid out here by Alberto Pérez Gómez is: Ben van Berkel, and Caroline Bos, *UNStudio, Design Models - Architecture, Urbanism, Infrastructure* (New York: Rizzoli, 2006).

[28] Pérez Gómez, *Built upon Love.*

[29] Alberto Pérez Gómez, *Polyphilo, or, The Dark Forest Revisited : an Erotic Epiphany of Architecture* (Cambridge, Mass.: MIT Press, 1992).

[30] Paul Ricœur (1913 – 20 May 2005) develops the ideas of Martin Heidegger and Hans-Georg Gadamer with regard their definition of phenomenology as 'interpretive' rather than exclusively 'descriptive'. He expands on it by examining how meaning is processed myths, religions, art, and language. In particular he suggests that the narrative characteristic of language introduces temporality into the creation of meaning and self-identity, and thus the imagination.

[31] Elaine Scarry is the author of several recent books on the role of individuals and their relationship with government (particularly in the context of the United States). Her most celebrated book was the 1984 work, *The Body in Pain - The Making and Unmaking of the World* (Oxford: Oxford University Press, 1987) which has become defined a 'definitive study' of pain and the infliction of pain. The book to which Alberto Pérez Gómez refers here is *Dreaming by the Book* (Princeton, NJ: Princeton University Press, 2001).

[32] *Hypnerotomachia Poliphili* is translated as *Poliphilo's Strife of Love in a Dream* in English. It is a romance whose authorship is still debated (attributed to Francesco Colonna) and published in Venice by Aldus Manutious in 1499.

[33] Marsilio Ficino (1433 –1499). An early Renaissance humanist philosopher central to the revival of interest in the ideas of Plato. See: Michael Allen, *The Platonism of Marsilio Ficino: A Study of His Phaedrus Commentary, Its Sources and Genesis* (Los Angeles: University of California Press, 1984).

[34] Calvino, Italo, *Invisible Cities* (San Diego, Harcourt Publishers, 1978).

[35] Daphnis and Chloe: the only known work of Longus, 2 Century AD Greek novelist. Set on the island of Lesbos, its style is rhetorical and pastoral. It has been adapted as a ballet and an opera. See:Longus, George Thornley, J. M. Edmonds, S. Gaselee, and Parthenius. 1989. Daphnis & Chloe. Cambridge, Mass: Harvard University Press.

[36] Zeki, Semir, *Splendors and Miseries of the Brain* (Oxford, Wiley-Blackwell, 2009).

[37] In this text, *Built Upon Love,* Pérez Gómez sets up a dual discussion and analysis of *eros* in Chapters 1-3 and *philia* in Chapters 4-6.

[38] The abstract nature of Peter Eisenman's dialogues on architecture with Jacques Derrida is typified by their 1997 book *Chora L Works*. Peter Eisenman, Jacques Derrida and Jeffrey Kipnis, eds., *Chora L Works: Jacques Derrida and Peter Eisenman* (New York: The Monacelli Press, 1997).

[39] This counter positioning of phenomenology with post structuralism runs against the arguments of Jorge Otero-Pailos who has suggested a reconsideration of their relationship in the context of architectural theory in the 1980s. He suggests they had a number of overlapping and

shared concerns. Jorge Otero-Pailos, *Architecture's Historical Turn: Phenomenology and the Rise of the Postmodern* (Minneapolis: University Of Minnesota Press, 2010).

[40] Evan Thompson, *Mind in Life* (Massachusetts: Harvard University Press, 2007).

[41] Frederick John Kiesler (1890 – 1965). His work was documented in: Dieter Bognar and Peter Noever, eds. *Frederick J. Kiesler: Endless Space* (Ostfildern: Hatje Cantz Publishers, 2001). The Shrine of the Book is a wing of the Israel Museum in Jerusalem that houses the Dead Sea Scrolls. It was designed by Keisler and opened in 1965.

[42] Daniel Libeskind's work has been extensively documented. The Jewish Museum, Berlin, has received particular attention. The project has been the subject of numerous texts. Typical in this regard is: Bernhard Schneider, *Daniel Libeskind: Jewish Museum Berlin: between the lines* (New York, Prestel, 1999).

[43] Corbusier's project has been extensively documented and analysed in both serious academic texts and as a site of 'cultural tourism'. See: Anton Henze, *La Tourette the Le Corbusier Monastery* (London: Lund Humphries, 1966); B. Brookes, *La Tourette and Other Buildings* (California: Facsimiles-Garl, 1985); Phillippe Potié, *Le Corbusier: The Monastery of Sainte Marie de La Tourette* (Zurich: Birkhäuser Architecture, 1997).

[44] Octavio Paz, *The Bow and the Lyre* (Austin University of Texas Press, 1991).

[45] Henriquez, Gregory, and Alberto Pérez Gómez. 2006. *Towards an ethical architecture: issues in the work of Gregory Henriquez*. [Vancouver]: Blueimprint.

[46] This project was extensively covered in the Canadian mainstream and architectural press. Samples include: Helena Grdadolnik, "Woodward's Takes Shape: 'Nothing like it in North America' - Citizens Pushed it Outside the Box," *The Tyee*, March 30, 2006; Nyla Matuk, "Urban Housing Street Poetry: Housing for Low-Income Residents of Vancouver's Downtown Eastside Adopts a Poetic Approach to Public Art," *Canadian Architect*, August, 1999; Brian Martin, "Vancouver's Changing Face," *Journal of Commerce,* May 2, 2007.

[47] Conference: *Reconciling Poetics and Ethics in Architecture*. The History and Theory of Architecture Program, McGill University School of Architecture, Montreal. 13-15 September 2007.

[48] Alberto Pérez Gómez, "Architecture and Public Space," in *Rites of Way: The Politics and Poetics of Public Space*, eds. Mark Kingwell and Patrick Turmel (Ontario: Wilfrid Laurier University Press, 2009), 47-55.

[49] Richard Sennett is a Professor of Sociology at the London School of Economics. His most influential work examines social ties in cities and the nature of urban living on individuals in contemporary cultures. His most recent work book is: *Together: The Rituals, Pleasures, and Politics of Cooperation* (New York: Yale University Press, 2012). Pérez Gómez mentions him in: *Architecture and Public Space*, 52.

[50] Ibid., 51

[51] Hans-Georg Gadamer, *The Relevance of the Beautiful and Other Essays* (Cambridge: Cambridge University Press, 1987).

[52] Here Pérez Gómez questions a strand of philosophy that is perhaps most celebrated in the writings of Emmanuel Kant, *Observations on the Feeling of the Beautiful and Sublime*, 1794; "Critique of Aesthetic Judgment" in *Critique of Judgment*, 1790.

[53] *Phronēsis* is the ancient Greek word for wisdom or intelligence. In Aristotelian Ethics it is defined as the "virtue of practical thought." It is often translated as "practical wisdom".

[54] With regard to Peter Brook this notion is most explicit in his first major book, originally published in 1968, *The Empty Space*. Peter Brook, *The Empty Space: A Book About the Theatre: Deadly, Holy, Rough, Immediate*, 4th edition (London: Touchstone,1995). Related ideas are found in numerous texts by Artaud, most obviously in *The Theatre and Its Double* which contained his two manifestos for a "Theatre of Cruelty". Antoin Artaud, *The Theatre and Its Double* (New York: Grove Weidenfeld, 1958).

[55] Here Pérez Gómez refers to the ideas of semiology developed initially by Charles Sanders Pierce regarding the sign, symbol and index. See: Edward Moore and Baird, Robert eds. *Charles S. Peirce: The Essential Writings* (New York: Prometheus Books, 1998).

56 This is a condition that Jean Nouvel has explicitly identified and incorporated into his architecture, arguing that the façade is a site for the application of commercial signs and that these signs are a legitimate aesthetic for buildings. Jean Nouvel, "Incorporating" (interview with Alejandro Zaera) in *El Croquis, 1987-1998.* (Madrid: El Croquis Editorial 1998).

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