How to Speak?

A Conversation with Alberto Pérez-Gómez about the Necessity of Language to Understand and Practice Architecture

Lorin Niculae, Jorge Mejía Hernández and Klaske Havik (WP): *This issue of* Writingplace Journal *is linked to an international network in which we're trying to make sense of the current challenges that European cities are facing, with other scholars from across Europe and from various disciplines (such as architecture, literary theory, media studies, sociology). We aim to do so by looking into narratives, both as potential sources of information about urban places and as potential tools for design. As we greatly value your work, which is a key reference for many members of this network, we would love to exchange some thoughts about these topics. In this issue of* Writingplace*, we're looking for the potential of literary language to understand and design urban places. In your recent book* Attunement*, you argue that 'as a creative and poetic device, linguistic metaphor is vital for the generation of appropriate atmospheres, claiming a central role in the 'language of the architect'.*[1] *Could you explain why literary language and especially metaphor could be useful for architects, both to analyse a place and to imagine its possible transformations?*

Alberto Pérez-Gómez (APG): In my view, literature that engages place is the best map, the best possible vehicle for a human understanding of cities and sites. This happens precisely through the use of metaphor and its derived tropes. I evoke metaphor in opposition to denotative language, simply because it is the master trope. Metaphor is at the centre of all other

tropes we use when we write and engage in these operations that interest us. The issue is to be clear as to how we name such operations. You mention analysis, but I would argue that analyses are a Cartesian mode of explanation, and therefore we have to be very clear about what we mean. Metaphor is not primarily analytical, it does not break things apart to explain them, it brings them together to understand, as Aristotle says very clearly. And a certain opacity always remains, because a metaphor allows you to understand something by bringing together two things that seem to be apart. That is what we do in order to know: we bring something that is distant close to us to make it familiar, and then we say we understand. The equation, in logic or mathematics, could then be seen as a special case of metaphor, one that is simply flat and reduced: truth as correspondence, such as two plus two equals four. Metaphor is a different thing altogether from analysis. An architect imagining human life in a new situation as a programme for design would do better by precisely doing that, imagining relations, how things work together, how there is a resonance between proposal and habit, perhaps not how actions can be analysed to be functionalized, which is what we normally do. When we are looking at how we learn from narratives, we should be clear about this distinction between analytical and literary modes of understanding.

WP: *In our investigations into European cities, we often come across historical local narratives. What do you think about the current value of historical narratives of place? How might this relate to the relationship between tradition and innovation, which you claimed in* Attunement*, is 'crucial for the proper social functioning of architecture'*[2]*?*

APG: It is Hans-Georg Gadamer who best explains that the meaning of artistic works, regardless of their kind or age, hinges on a dialectic between tradition and innovation. Basically, when we are moved by a work in our experience, when we learn both cognitively and emotionally something we perceive to be of value, the work gives us something new and at once

something we can recognize. These two things happen at the same time, they are in dialogue. It opens up something new while we also recognize its familiarity.
Gadamer uses the Greek concept of the *symbolon* – a *tessera* carried by someone to be recognized as a member of a group. It was a kind of token, a clay disk that you would break and give to a friend so that he would be recognized by your group or family. If you went to war and died, the friend could bring it back to the family and be recognized. It's fascinating. The *symbolon* is about making something whole. When something is 'symbolic', the argument is that it makes us whole – even if only momentarily. Gadamer argues that the work of art or architecture offers a profound sense of recognition – not a single meaning, but the possibility of feeling and understanding ourselves as complete in a particular situation, whole and therefore potentially holy.
The merely novel often seems nonsensical – we know this well from our experience of contemporary art. Of course, there is a paradox here, which is well described by Stravinsky when he writes that 'anything which is not tradition, is plagiarism'. You have to connect to something that is recognizable, otherwise you run the risk of merely repeating yourself – which is what Stravinsky is saying. When you relate to tradition properly, as Le Corbusier did when he produced his designs for La Tourette, you relate to tradition in a way that what you produce is actually new and different, but recognizable. Le Corbusier found something at the end of his life that he had not realized in his earlier career, when he was less interested in history. In other words, we turn to history precisely not to repeat it, but in search of semantic innovation. For Paul Ricoeur the possibility for semantic innovation is linguistic. Semantic innovation starts with language. This is a philosophical position that comes from Heidegger: we cannot live outside of language.

WP: *You connect this relationship between tradition and innovation to the linguistic imagination. How do you see this connection? In which ways can linguistic imagination be of any help?*

APG: First, we should understand that the very nature of imagination is not pictorial but linguistic. This is a long conversation that I try to follow in my book *Attunement*. In short, we need to first recognize the phenomenological origin of language. There is a dominant tendency to understand language as an arbitrary code – the well-trodden argument brought to the fore by structuralists. Instead, the argument of phenomenologists such as Merleau-Ponty, Heidegger, Gadamer and Steiner is that language is not arbitrary and that it is in continuity with gesture and with the flesh of the world, which is this undifferentiated condition from which our understanding emerges.

One can agree with Heidegger, Gadamer or Steiner that language is not an arbitrary code, that it speaks through us – that despite its remarkable plasticity and plurality, it speaks from the world and about the world of experience. Paradoxically, true poetry is that which is eminently translatable, while it can never be simply transcribed. Poetry can be translated if it really speaks about what matters, because it rises from this original condition of language.

Translation is a fascinating phenomenon. One can argue that we are still speaking the original language. Languages don't really die, they just transform. A fascinating book by Heller-Roazen discusses this idea – that language does not die, but translates. Steiner also says that the condition for us to understand each other is that we are always translating each other. Even in the English that we are speaking here, you are taking my words and you are translating them. There is no transparency, and that is precisely what enables communication.

Being the first mediation between world and consciousness, images are made of language. Even a so-called mental image is never like a picture or photographic imprint. We know this, for it has been corroborated by neuro-scientific studies. Instead, an image is a situation in place, set up in words.

Once we understand this, we recognize that language has a fundamental function in semantic innovation – basically to bring that which is far in relation to something that is near: indeed, a metaphor. We usually assume the reverse: that language is first denotative, and this is the first mistake, a pitfall for all subsequent questions. All human language is first poetic and polysemic, and we need to learn to embrace this difficulty, rather than pretend to escape it. Particularly when it comes to communication with others, the celebration of this opacity, and of that which remains unsaid or tacit in the particular languages that we are engaging in, is absolutely crucial.

WP: *In* Attunement *you give great value to myth as a way in which places were understood and given meaning, stating that 'the qualities of place were always enacted through myths: oral, ever transforming stories that were deeply shared by the people and intertwined with the landscape.'*[3] *Does it still make sense today to search for local myths in our urban analyses? And what can they tell us about how places are perceived and interpreted today, especially thinking of European cities whose demographics are changing, and where different social groups may have very different understandings of the same place? People's rootedness to place might be much more complex today.*

APG: It is important to grasp the original nature of myth – it is a particular form of a logos or discourse, a story that articulates human purpose, usually in continuity with a more-than-human world: the natural world. Myths are usually collective beliefs, enacted as rituals, as habitual human actions framed by architecture (which is crucial for their meaning). There is a kind of reciprocity – one that is important when we talk about architecture – between myth, storytelling and rituals. We could say that rituals are myths in action. As architects, we frame human actions. Rituals are not like brushing our teeth every morning. They are human actions in which the agent cannot be sure of the outcome. The real agency

in rituals is usually deemed to be external, like when Aboriginal peoples perform a rain dance. Myths were first understood as profound beliefs grounded in perception and poetic language by Giambattista Vico – they are not simply fairy tales or fantasies, however alien they may seem to us and to scientific rationality. With the demise of a generalized cosmography and religious belief, myths and rituals have transformed. The core of what they represent remains a human need, but not their original embodiments.

We cannot argue that we believe in the Greek myths, we may be fascinated by them, like I am, but we cannot believe in them. Equally, participation in rituals is no longer comprehended by most European populations – except for some marginalized groups. All this creates a problem of participation, which goes to the core of possible meanings in modern and contemporary architecture.

Arguably, as claimed by scholars like Octavio Paz and Hans-Georg Gadamer, the great themes that articulate human purpose in narrative form transfer to literature in the nineteenth century. Some European writers like Louis Aragon and Bruno Schulz, among other great writers of the twentieth century, have actually tried to confront this issue head on, when they actually attempted to write narrative fiction as myths. Have they succeeded? Are there equivalent literary narratives that address human purpose in the context of modern European cities?

Philosophers like Gianni Vattimo have recognized that we are kind of in a bind: we know that we cannot go back to myths, but we also know that scientific rationality is no substitute, because it does not provide the answers to real human questions.

Yes, it is possible to find contemporary narratives that function like myths, but these important stories are diversified. They may exist in film, TV, novels; in media as diverse as the new urban populations they address. Against the complex problem of identification derived from the proliferation of media and communication, I still believe that finding the appropriate voices to convey the value of human actions and the qualia of lived places that frame them is possible and necessary. These voices are literary in essence.

WP: *There was another dimension of myth that you touched upon earlier. If local myths are 'ever transforming', could our architectural interventions be understood as transformations of local stories? Could you reflect on the transformative dimension of myths that are told and retold and eventually turn into other forms, like movies or tv shows? And could we understand architectural interventions as transformations of these local stories? Could architecture shape, tell or transform local myths?*

APG: Architecture modulates habitual action that is in itself meaningful, even if not loaded symbolically, like ancient rituals. We know from contemporary neuroscience that this kind of knowledge is at the foundation of other representational kinds of knowledge. Martin Heidegger speaks of 'focal actions' as habitual actions that seem to be particularly important, like sitting around the table and having a meal for those of us with European origins. I was fascinated when I went to Bali, and saw that these people have rituals for everything, but they don't have a table in their house. They do not sit down to eat. I found that remarkable, for Balinese culture is completely invested in rituals but they do not dine, whereas for us it is very important. For us a meal is such a 'focal action'. In the movie *Babette's Feast*, for example, there is this long scene where the meal is transformative. By framing focal actions properly, we could enhance architecture's capacity for attunement.

WP: *In* Attunement *you see a role for poetic language, 'to reconcile the architect's personal imagination with an understanding of local cultures and pressing political and social concerns: the crucial dilemma we have inherited with our modern condition'.*[4] *The question of understanding local cultures comes to the fore when working with communities that are very hard to analyse. Each time you try to make Cartesian analyses, you fail because you cannot even find out the number of family members a family has. As soon a somebody marries, goes away or comes home with a groom, it is very hard to assess the population of such a community. Hard methods fail. Of course,*

we try to collect data and situate ourselves by means of conversations, local narratives and myths. It's very important.

One problem of working within communities is linked with direct data collecting from the locals, via interviews. We would hope that hearing their stories, needs and wishes directly would help us formulate correct architectural answers. But in many cases, the questions are rarely answered directly or usefully; they are biased by our presence, by what the interlocutor wants to transmit or thinks we would expect to hear.

To what extent do you consider that data collected by architects from people first-hand is true or accurate? Could architects base their Ricoeurian prefiguration on inaccurate information? Do they have the means to discern what is true and what is false? Is it the truth of a local narrative a value to be sought, at risk of destroying the poetics of a narrative? What prevails: truth or the poetics? Or is this a false dilemma?

APG: One the one hand, the architect has to cultivate humility, learning to really listen to what others say. I understand the problem in the situation that you are describing, but I still think that we have to learn to listen and enter into genuine dialogue. A reason why one is seen with suspicion is because for the last 200 years social science methodologies have treated the 'other' as a kind of experiment. It has not been about entering a conversation, it has been about gathering data. We are received with suspicion because we don't enter into a dialogue, because we think we have a superior knowledge or methodology, because we are 'analysing'. In that sense, I have a problem with social science methodologies – I don't think that they are very useful to architecture and urban issues. Real dialogue is more important. To acknowledge the other as truly different while trusting a conversion of horizons is possible, and leads to true understanding. This comes from hermeneutics, which are really about understanding, about opening yourself to the other.

The challenge is to truly engage the other, to seek a communion – a fusion of horizons, to use Ricoeur's terminology – while recognizing that actually a distance exists between our own world and that of the potential inhabitant of a project. That is the other misunderstanding: that we can somehow eliminate this space. What people like Gadamer and Ricoeur explain about the hermeneutic method, when they talk about how to understand a historical artefact or understand a different culture that is synchronic, is that a person entering into a dialogue must recognize that there is something to be gained from the distance. Because there is something about the distance that enables you to understand aspects of a community that you wouldn't understand if you were one of them. Distance enables you to understand habit in a way that they don't see it, so that you can valorise it, frame it in a way that makes sense to them.

All this is to say that we have to be very careful with where and how we choose to practice. The issue is to develop a common ground of commonality: language. It's a very patient operation, one that demands real love and compassion. We don't practice to please a client, we practice with the common good as primary ethical aim.

There are other articulations of stories, as you say, that are different from first-hand interviews, and that may in fact in many cases be more valuable or authoritative. Our only hope is to enter the conversation in good faith.

Of course, the living myths and stories of communities that articulate issues of foundation may bring about an understanding of the nature of place and the task at hand. Architects bring in a good cultural, philosophical and historical foundation, which allows them to be discriminating and decide what matters for the project. That is what we are contributing, this is our role. This is why architecture is fundamentally a human discipline, not a fine art or a scientific operation.

WP: *You say that scientific rationality never amounts to the power of myth but that's an assumption of scientific rationality as one that aims for truth. We could also argue that the origin of science is myth, or that science is fundamentally a myth-making activity. You talk about a crisis in modern science. If we reject the more 'arrogant' aspects of scientific rationality that claim universal truth, can't we see a possible attitude in the sciences that allows the questioning of myths? An attitude that does not take myth as it is or for granted, in order to accept or just follow it, but that recognizes myth as something that can be challenged or questioned?*

APG: Although I believe sometimes that technology is magic that fails, I'm not a luddite, and I'm not saying that we have to go back to myth. I'm just saying that there are incredible limitations to the extrapolation of scientific thinking to what we do, to questions that arise from our human condition. I think it's a bit more complicated than the binary that you assume in your question. And I explained this, I hope, in my first book in which I referred to the crisis in modern science, specifically paraphrasing philosopher Edmund Husserl. His insights have particular relevance for architecture.

In his *Prolegomena to Any Future Metaphysics* (a famous little book), Kant basically says that you are not allowed to be a philosopher if you don't follow the same logic of rigorous mathematics. Thus, he ushers in positivism, expecting all discursive thinking – including philosophy – to depend exclusively on mathematical reason for its deployment. What happens with Husserl and his students (what later became known as existentialism and phenomenology) is basically the realization that it's impossible to make sense of the things that matter to humans if all you have are the tools of positivism: syllogism and clarity. For this reason, every science – this is what Husserl says – becomes a self-contained universe in quest of positive answers. The result is that human questions are left open for some future resolution. According to Husserl, this amounts to a humanity in crisis, because we become incapable of articulating, through our present thought

and action, the purpose and place in the universe of what we do and what we are. We are in trouble!

What's even more fascinating about Husserl is that he recognized that the first science that became self-referential, separated from the world of embodied experience, is geometry. He pointed to the functionalization of Euclidean geometry as a first instance of the crisis: geometry, a discipline that always referred 'semantically' to the world as lived. Euclid's axiom of parallel lines, founded on tactility, becomes emancipated from this primary founding intuition and through its mathematical syntax is capable of not only reproducing (visually) the environment, but of creating autonomous (possibly nonsensical) worlds. Husserl is not being negative about the sciences; he's not saying that science doesn't work. On the contrary, science works very well. The problem is the kind of discourse that it is. Both hard and human sciences became self-referential systems, bent on instrumentality and legitimized by their efficiency, yet dissociated from the world of experience, from the real questions that can only be expressed in everyday language, with its opacity, with its polysemy. In other words, in all disciplines syntactic coherence is given priority over semantic relevance, and prosaic, supposedly direct language ultimately modelled on the ideals of mathematical algorithms is given priority over natural and poetic languages, which as I already said are always partially opaque and polysemic.

There is an intrinsic fallacy in this belief of self-referentiality that still drives the sciences today. One instance of this fallacy was demonstrated for mathematics by Kurt Godel in 1931 – it's called Godel's proof. Husserl led the way to discover the fallacy of meaning as something existing exclusively 'inside my head'. During the nineteenth and twentieth centuries, and even today, the Cartesian soul becomes the brain, and is believed to be the exclusive seat of consciousness. Phenomenology and some recent cognitive science and neuroscience now question this belief. Consciousness, they say, is always enacted, is part of life itself, it's embodied (because you

cannot think as a human without your particular human body), and it's in place. Without that, you basically don't have human consciousness. This is an insight of great consequence for architecture, because it means that the environment really matters.

Those are the stakes! If you keep analysing the hell out of the environment you just keep on producing neutral environments and you're screwing yourself. That's why I'm passionate about this. It's a problem that telecommunications have paradoxically made incredibly worse. We thought telecommunications would make communication transparent, but instead it has become more opaque. We need only recall the phenomenon of 'fake news'. But we cannot for this reason say: 'The language we speak is useless, we can only analyse.' On the contrary, we have to be well grounded, well oriented, as best as we can possibly be, to be able to operate. That's the shift I am arguing for.

It is of course not a matter of going back to some religious or magical mentality. Obviously not. But we need to recognize the limits of positive reason, including methodologies built upon Cartesian models. The alternatives are hermeneutic methodologies, built upon the tradition of Aristotelian practical philosophy, seeking not absolute truths but possible local truths, topical truths – from *topos*, place.

It's about *Aletheia*, the Greek word for wisdom or phronesis, which recognizes the possibility of a conflict of interpretations while never granting the relativization of truth. I can recommend a remarkable book by Ernesto Grassi: *Rhetoric as Philosophy*. Grassi was a student of Heidegger's who got upset with his teacher for political reasons, and rightly so. He was a brilliant man who died very young, and wrote this very short book where he argues that the real philosophy is one that was always supposed to be second rate, from Plato all the way to Kant, ever since we became enamoured with the clarity of mathematics. Aristotle explained that aside from theoretical

philosophy we also have recourse to what he called practical philosophy – *phronesis* in Greek, *prudentia* in Latin: Wisdom, prudence, verisimilitude. It's a truth that opens and closes, that is true insofar as it connects to a certain time and place, a locality. The ability of the rhetor, the speaker, would be to make truth clear for others in a certain time and place. That's rhetorical language: It's not to tell lies, it's that which is self-evident to a social group. But it doesn't have the clarity of mathematics, it emerges from common, polysemic and not denotative language. *Aletheia* is not there forever, and that's not wrong. That's what we can know as humans about our own condition, mortals on this earth.

That is the alternative. It's not myth in the traditional sense, it's not religion. Hermeneutical philosophy is the real alternative. Except that we don't consider it because we are obsessed with the supposedly unshakable objectivity of scientists. Since the beginning of the nineteenth century that has been architecture's curse.

WP: *Indeed, we're looking into narrative in relation to places and communities because it makes it possible to give other information, or more local information, and to give the stage to different voices. But how can we deal with diverging or contradictory experiences, or the risk that we're misinterpreting things?*

APG: We talk because we have a body that is vertical, bipedal and oriented with our distinct sense of direction. Merleau-Ponty would grant that, indeed, we have different interpretations. And yet we have in common so much that we are able to talk about it, despite the enormous diversity among human languages. Neuroscience would add today that 80 per cent of what we call consciousness is pre-reflective, and what we disagree about is about 20 per cent, like the tip of an iceberg. We love the part of our consciousness that enables language, art and mathematics because that's what we think makes us human: our intellectual attention. But we really share a whole

understanding of the world, which is very different from an ant's, a spider's or a dog's. We don't understand the world of the dog, no matter how much we think that we do. The world of the dog has to do with its morphology, its biology, its genetics and its intelligence. We may admire it, but we don't truly understand it.

Prior to the nineteenth century, if I may generalize, the world of architecture was not about drawings, but about building in qualitative places, whose meanings were given in the spatiotemporality of human actions. Despite the complexity that has always been attached to the production of buildings since the Renaissance, the architect was responsible from the inception of a design idea to the completion of a building, and even beyond. There is a fascinating fragment by Filarete, where he characterizes the architect as the mother of the building (the client being the father). Both are responsible for bringing it into being and for its care and success. What I would retain from this is that the translation from idea (say, the idea of the client, the 'father') to the drawings, models and actual building that the 'mother architect' nurses, are processes that enrich the outcome; processes that needed to take into consideration the specificity of real conditions for their embodiment.

What made this possible was language. This observation connects to our own interest in narrative. Language was crucial to enable the translation from commission to realization. Architects, clients and society celebrated the importance of spoken language to carry the intentionality through. From the bishop or the abbot to the master builders, in the construction of cathedrals in the Middle Ages, from client to architect, continuing with Filarete's analogy, all have carried the baby for a few months and, once born, have brought it to fruition through language. Language was crucial to make the cities we all adore. All rich cities of the world that have the kind of incredible emotional power that comes from craft were made possible by language, which enabled everyone involved in their construction to believe

that the process of translation was something that enriched rather than impoverished.

WP: *In your book* Built upon Love[5] *you make a case for an architecture generated on the basis of, and directed towards, love – understood as the convergence of eros and philia. If – following Huxley – we presume that love cannot be known, but only understood, and that understanding is not entirely communicable, how and what should architects communicate with and to each other?*

APG: What I argue in that book follows an insight from Socrates. Love is taken as an archetypal feeling, a master feeling, because you could also say that hatred is a modality of love. It's a feeling that is granted to us as a condition of existence (Aristotle says that much: 'I feel, therefore I am') and that in fact makes clear thinking possible. It makes the recognition of the self-conscious, thinking person, a possibility. That's why in early Greek thought Eros, articulated in the poetry of Sappho, appears more or less at the same time as the first philosophers.

Socrates says that what is interesting about love is that it makes knowledge possible, even if it remains itself an enigma. It's like a gift that makes us human, connected to our self-consciousness and to our openness to death. Nowadays neuroscientists can claim that emotion is generally the beginning of knowledge. Emotion is crucial, and we're better off if we acknowledge it than if we believe that the only true kind of knowledge, that the only legitimate kind of knowledge is dispassionate knowledge – the claim of positive science.

This intertwining of the emotional and the cognitive is at the root of what I'm saying in *Built upon Love*: that it is important to recognize the centrality of love and empathy, but that doesn't cancel the conversation. On the contrary, it makes it relevant. I'm not sure if this answers your question,

but I do remember coming across Peter Eisenman after I wrote this book and he was very upset with me, because, he confessed, his whole premise about architecture is that it had nothing whatsoever to do with love – either as erotic presence or social contract. The claim for a self-referential, purely formalistic practice is of course totally at odds with what I maintain.

WP: *Bringing together the above questions, talking about love and about science, about the difference between what you called analytical language and natural or poetic language, could we still learn from the advancement of scientific knowledge, for instance through the development of new instruments and methods to confront our problems? Even if we believe that architecture has a fundamentally poetic origin, in what instances (if any) would you consider rationality and the aim for knowledge to be useful or indispensable for architects?*

APG: That is a very interesting question, I would never deny the importance of reason in architecture. I think now you understand what I mean is just that I don't think that reason (*logos, ratio*, the words we use to convey knowledge) can be folded into scientific rationality and made to operate on the model of two plus two equals four. Since its inception in classical antiquity, our discipline has been grounded on reason: *scientia* and *prudentia* (or *theoria* and *phronésis*) on the one hand, and also the non-representational motor skills of craft on the other. These three things are crucial, says Vitruvius. Three modalities of knowing that have to collaborate to enable the task of the architect and that are actually not reducible to each other. Even scientific reason, one that is fascinated by regularity in mathematics and proportions, was not originally prescriptive of techniques. It was a mode of contemplative knowing all the way to the end of the seventeenth century. That was its dominant modality. Scientific reason, however, after the nineteenth century (and this has been the argument I've been trying to put forward), has proven incapable of grappling with central questions of meaning, however necessary it may be to deal with issues of production,

efficient construction or sustainability. What we are left with to address our central questions is therefore practical reason, narrative language, as I explained before. Reason, as bare natural language, is not bound by some exclusive mathematical logic or syllogism.

A sound understanding of the history of architectural representation is crucial, I think, to see with clarity why narrative and literary tools are so important today, as means to recover qualitative issues in our experience and cultural values. This is the issue at hand for your work in the journal. I have also written a book about this problem.[6] In fact, while graphic tools of representation become more kindred to scientific rationality, in their ability to depict with precision, they lead the world through scientific mapping and planning. For example, with the inception of perspective as a tool for representation in the seventeenth century, or eventually descriptive geometry in the late eighteenth century, it became possible for architects to imagine that the work of architecture is actually the drawing, or a coordinated set of orthogonal projections that perfectly describe and predict a building to come. This is hardly the case before the scientific revolution and more specifically before the implementation of descriptive geometry at the École Polytechnique in Paris at the beginning of the nineteenth century, a tradition that continued into the École des Beaux-Arts and beyond.

The new tools introduced at that juncture are evidently the origin of our software; they exhibit an identical intentionality. That's for me the interesting lesson to retain: that the so-called digital revolution is a misunderstanding. In this sense maybe we really do overstate the importance of these instrumental tools. In other words, reductive tools of representation, becoming tools for precise picturing, implicitly deny the importance of language to understand the world, and deny the importance of place. Qualitative places start to hide behind our construction of conceptual space, identified with the space of urban and architectural design *tout court*: the space in the computer screen.

Today we are in a bind because we think that we have to put everything through BIM and make sure that what we draw is what gets built. We cannot possibly understand how any discrepancies could be celebrated as something positive, and we don't articulate our intentions in language. It's the mathematics that do the work, from the computer software to the fabrication. It's really fascinating, how these things actually are connected.

Only at the beginning of the nineteenth century did craft and building trades start to appear as universally problematic – as something to control or prescribe – even implying an idiocy involved in productive hands, implying that the rational architect knows better because we're scientific and we have all these prescriptive tools. This is recent. No architect would have ever thought that way prior to the early nineteenth century, when the architect became the author of the drawings that prescribe the next steps – this being considered the 'work' itself, with a full ontological weight. Unfortunately, as we all know, it would be silly to imagine that we can simply short-circuit our contemporary tools of production and the expectations of a technological world.

This is, I think, the central dilemma, and crucial to understanding both the value of what we do when we talk about literary tools in the design process as well as the limitations of this position – why one finds so much resistance. This polemic is real and foundational. These technological tools really are against language, they are algorithmic, and this is their 'language', the so-called language of algorithms, which is actually anything but a language. Understanding these issues is important to frame the design process differently, to embrace materiality and the challenges of translation in the linguistic world; embracing, for example, local craft practices. That's the challenge architects face. It's a huge challenge.

1 Alberto Pérez-Gómez, *Attunement: Architectural Meaning after the Crisis of Modern Science* (Cambridge, MA: MIT Press, 2016), 184.
2 Ibid., 187.
3 Ibid., 115.
4 Ibid., 191.
5 Alberto Pérez-Gómez, *Built upon Love: Architectural Longing after Ethics and Aesthetics* (MIT Press, 2006).
6 Alberto Pérez-Gómez and Louise Pelletier, *Architectural Representation and the Perspective Hinge* (Cambridge, MA: MIT Press, 2000).