THE LATER ACT | semiotics < computational craft

Mollie Claypool

The Architectural Association, London, UK

ABSTRACT:

This paper is an interlude in three parts: the semiotic, the formal and the problem of the present. It will attempt to present an outline as to how the discipline of architecture can find a way to begin to turn away from the variability of language as embodied architecture's nod to the sciences and towards philosophy. It is concerned directly with operative use of philosophy in terms of the act of making as tied into the computational turn. We look to the computational turn in architecture as a philosophical problem. This reveals itself in being directly recognised as the familiar philosophical problem of the mind and body; or, as it will be discussed here, the subject-object problem. The reading of the subject-object problem will agree with the ascertain of Pierre Jacob when he stated that perhaps one could derive "intentionality from function and and consciousness from intentionality." It will aim to present us with, as Kipnis ever so poignantly noted in 2007, "the later act" in which we can learn "whether Eisenman's choice ends in comedy or tragedy." The later act of this paper will put forward the term computational craft, a seemingly paradoxical term functioning as an inverse proposition.

CONFERENCE THEME: The role and use of philosophy in architectural research
KEYWORDS: philosophy, computation, craft, application, subject

THE LATER ACT 0.0 INTRODUCTION

> Anybody who asks, how can we apply the computer to architecture?' is dangerous, naïve, and foolish, because only a foolish person wants to use a tool before he has a reason for needing it. He is naïve, because as the thousand clerks have shown us, there is really very little that a computer can do, if we do not first enlarge our conceptual understanding of form and function. And he is dangerous, because his preoccupation may actually prevent us from reading that conceptual understanding, and from seeing problems as they really are.[1]
>
> -Christopher Alexander

I have a confession to make.

I am not interested in architecture.

This may sound like a strange statement for my colleagues to hear, as after all, according to my resume (a great indication of the paradoxes one holds hidden in their history), it seems I have been consistently only interested in architecture. And, to those who have many decades of experience to my one, one can only assume

that I must sound disillusioned and naïve.

The first time I said this to anyone was close to a year ago, and, as any self-respecting woman in her late twenties does, to my mother over dinner during one of my rare trips to my parent's house.

"Ma, I don't think I am interested in architecture anymore."

She stared at me blankly. I tried to explain. She eventually told me to stop talking and, as any mother does, to do the dishes. I obliged, begrudgingly and defeated.

I've come to know that blank stare rather well in the last twelve months. I received it when I said that very statement to my teaching partner, to my boss as he read the first draft of this paper, and to the AA's janitor who I've found myself having late-night debates with in recent months. I received a very mysterious smile from my mentor, who told me only one word in response: 'Enjoy'. And now, I say it to you.

I am not interested in architecture. Let me explain.

The state of architecture in the twenty-first century has been primarily concerned with the unfortunate circumstantial philosophical leftovers of the overlap and paralleling of a phenomenological framework with – as embodied in theoretical practice only – a radical neo-Kantian interpretation by Foucault. While we do not wish to spend much time pondering such known and read philosophical writings, we do need to recognise their relevance to the twenty-first century. The resultant topography of this condition is one which has been encouraged by a growing relationship between architecture – not architects – and language. While this is not unknown, the first protagonists of this Post-modernism emerged out of a consistent effort to free architecture from meanings derived from within and out of Classicism and Modernism. This effort produced arbitrary objects of architecture, removed entirely from cultural meaning. The subject[2] became the controlling and originating agent of meaning.[3] With the advent of new technologies there simultaneously arrived the computational turn; the language of code and of endless formation which is removed from signification entirely.

My interest lies in clarifying the problematic muddled under this resultant indifference. It recognizes that, to blatantly rip from The Dude – and this paper will not apologize for this reference – the 'royal we'[4 [see endnote]] has become profoundly apathetic towards the origin of meaning, in favor of the infinite multiplicity and variation allowed us by a growing reliance on technology. Any interest in architecture – especially as a material, object-based practice – is happenstance, rather than fraught with a sense of self-aware causality. My lack of interest in architecture is not only circumstantial of my generation, but demanded for by the need to disconnect from a practice of architectural theory less concerned with the intentionality behind the object itself than with the multiplicity of form(s) and variations of meaning.

This paper aims to denounce the meaninglessness that was sought in the work of Eisenman, established in the infinite variation of Lynn's blobs, and further developed in the 'softness' of Kwinter, which has pervaded its remains into the inner crevices of the architecture and architectural theory of the twenty-first century. It carries with it a grand umbrella in favour of an interrogation of the present lack of application of philosophy in architecture. This is very different than being interested in architecture. This is also very much the opposite of being interested in architectural theory.

This paper is an interlude in three parts: the semiotic, the formal and the problem of the present. It will attempt to present an outline as to how the discipline of architecture can find a way to begin to turn away from the variability of language as embodied in architecture's nod to the sciences and back to philosophy. On a more familiar level, it is concerned directly with operative use of philosophy in terms of the act of making as tied into the computational turn. We shall see the computational turn not as a architectural paradigm shift, but a beginning of a philosophical one, as formulated through the subject-object problem.

One may wonder as to the relevance of the broadened scope presented in this paper. This was done purposefully. The later act of this paper will begin to formulate a means to go forward in *computational craft*, a seemingly paradoxical term functioning as an inverse proposition. One should hope that these are not construed as the words of a cynic, but auspiciously working towards a specific practice of architecture. I am not interested in architecture purely because architecture has become too superficial and regurgitated to be interesting. It will aim to present us with, as Kipnis ever so poignantly noted in 2007, "the later act" in which we can learn "whether Eisenman's choice ends in comedy or tragedy."[5]

INTERLUDE 1.0 THE SEMIOTIC

When the origination of a concept is studied, the subject – the thinker, in this case, the architect – and object – the thing itself, form, or in this case, the object of architecture – are maintained in a mediation. This can be traced back in philosophy to Kant. Foucault presented this in the following way:

> The question which seems to me to appear for the first time in this text by Kant is the question of the present, of the contemporary moment. What is happening today? What is happening now? And what is this 'now' which we all inhabit, and which defines the moment in which I

am writing? […] Now it seems to me that the question Kant answers […] has to do with what this present is […] The question is: what is there in the present which can have contemporary meaning for philosophical reflection.[6]

The question of the present can be perceived to be the downfall of all architecture theory since Modernism, when classical forms were representative of their function and their historical meaning. The relationship between the subject and object was formal.

The subject and object do not negate each other as the potentiality embodied within the act of making is mediated. For example, the meaning of the verb *to compute* oscillates pending the presence of an object, from abstract to concrete. The potentiality of computation therefore is determined by the mediated presence of either subject or object. Meaning is varied. This variation in meaning is our site of investigation. It is this hesitation, this moment of pause, which gives rise to the inevitability of the insertion of language into a philosophical playing ground.

The linguistic sign, as it was argued for by Ferdinand de Saussure, is dualistic in that it is made up of two entities – the signifier and the signified.[7] The sign, as a result of the signifier and signified therefore becomes recognised as the object of linguistics. However, we must recognise that this is a devolution away from the seeming physicality of the Kantian structure of the subject and object, and in doing so, does not necessitate the presence of an object. Instead, in Saussure's semiotic model the subject becomes primary, for not only does the subject originate the concept, but the subject originates the sound pattern – or material element, as Saussure refers to it, as well. This material element, as being related directly to representations of experience,[8] is most important to our discussion, and will be brought back later in this paper.

There is a correspondence in this oscillation between sign and signifier which enables variations of types of signs. This is referred to by Saussure as the first principle, which states that the sign is arbitrary.[9] It is the state of being arbitrary that is the most basic truth to the nature of semiotics and of the sign, which, as Saussure puts it, is "arbitrary in relation to its signification".[10] The second principle of the sign is in regards to the signal, or the object in Saussure's semiotic structure. The signal cannot exist in three-dimensional space, as it is temporal. It is only but a line,or occupies only one dimension.[11] It is an auditory, not visual symbol. We can only understand these signals as being part of a series, and "have available to them only the linearity of time"[12] The one-dimensional nature of the sign shows itself immediately when they are representing through the act of writing. The sign is the product of a phenomenological experience, and yet, consequentially, is removed one step further than phenomenology from physical actuality in three dimensions.

There are several assertions which can be made in light of Saussure's conclusions and the previous content of this paper. One is that the connection to architecture can only be understood as a tertiary condition to language – as one understood primarily through the subject, not the object. This is because architecture holds a function outside of its form-making process, and therefore outside of the subject-object problem in semiotics, as well as being physically unable to be found in the third dimension. However, the sign can fulfill the 4th dimension, primarily when considering mathematics. This is an important concept and one which is an underlying investigation threaded, ever so carefully, through the thesis of this paper. When one frames the lack of a direct behavioural element of the sign in light of the sign managing to be comprehended in terms of a 4th dimension, and the other disappointingly obvious and ignored condition – that of the material element of the sign – we find a linguistic principle which fails to relate at all to physical form. The subject and object are broken free from a directly mediated structure. This can, however, enable a relationship between mathematics, biology and metaphorical time. We are now – if we consider the 'we' presented in this paper as the linguistic signal – able to contribute to a representation of the 4th dimension (a-physical) with an apathy towards exteriorities (a-historical).

It is here that we find ourselves in the presence of a perfect number of excuses for the application of a semiotic function to architecture. The linguistic sign determines that any object must by necessity have signification assigned to it through an intellectual disciplining, since it is a-physical and a-historical. The subject-object relationship here becomes entirely bound by the capacity of the subject to respond only to linear temporalities, and thus cannot remain architectural when thought

of as in this structure. The mistake is that this intellectual disciplining has latched onto mathematics, time, and as a result has looked to superficial formulations of variability in the sciences for meaning and essence. I do not say this to oversimplify the intellectual efforts of post-Modernism in so far as set the stage for a seeming misappropriation of the sign into architectural discourse. However, I do say this to confirm the cautious statement of Silvetti, when he stated that "the use of metaphor in architecture, as in any practice, should be looked at as an enrichment of meaning and not as a replacement for the thing itself."[13] One could say that this is setting the stage for the latter part of the later act.

INTERLUDE 2.0 THE FORMAL

The application of the linguistic sign to comprehend form can be traced through the palimpsest of architecture to Egyptian hieroglyphics which were used to literally impart mythological time as an ingredient in the problem of modernity. We again see the imposition of the sign in Classicism and again in Modernism. The linguistic sign presents a radical notion of tradition, which when found in the architecture of Classicism, is found as a representation of a continued antiquity. The Greek orders – Doric, Ionic, Corinthian – are a most obvious presentations of this. Their architectural forms are types of the same element. They perform the same function, yet their forms are arbitrary within that certain historicised function. Saussure confirmed this himself with stating; "the individual has no power to alter a sign in any respect once it has become established."[14]

This is promptly interrogated by Eisenman in his theorisation of the lack of capacity of Modern architecture to break from historical conditions and meaning. This is done primarily through the recognition that Modernism never fully was able to break away from earliest manifestations of its representational tradition, recognised as *abstraction*. However, this abstraction is specific in its relationship to a pure function. It is the language of the function, which Eisenman referred to in his essay "The End of the Classical, The End of the Beginning, The End of the End" (1984) as the "message of utility" – that actually acts similarly to the historical representation of antiquity in Classicism.[15]

The subject becomes removed from the object of architecture in terms of any historical representation, thus bringing into the Modernist discuss the moment of modernity and its value outside of form – its function. As Michael Hays stated,

> In Eisenman's view, modern architecture was never fully modern. Though it did produce a certain opacity of the architectural sign […] modern architecture was never really free of the burden to mean; the referent still survives, albeit problematically, in cherished modernist emblems like the industrial shed, grain silo, and steamship, their workmanlike materials and their social utility.[16]

The craft embedded in the utility and function of Modernism could have been the shovel of dirt on Eisenman's theoretical grave. We find ourselves in the position of confronting Eisenman's continued foray into displacing meaning from the object, despite a indication that the failures of Modernism to break from the subject of history could perhaps signify a need to respond to the encouragingly superficial nature of the production of Modernist objects of architecture from the point of view of their craft.

Instead, Eisenman latched onto the linguistic model as the way into the search for an architecture of autonomy from meaning. The object of architecture became a result of a purely linguistic system of architecture which cannot embody any sense of meaningfulness, reason, or time. The subject, ultimately, becomes the sign, and signifier of meaning, or lack thereof. Form, as Eisenman stated, becomes;

> understood as a series of fragments – signs without meaning dependent upon, and without reference to, a more basic condition.[17]

This coincidentally does not take into consideration the linguistic truth that signs can never be removed by the subject from their established set of meaning. The 'basic condition', as Eisenman refers to it, can only be understood in this paper as the condition of self-aware consciousness and causality; of being human. The potentiality between the subject and object is unfortunately negated through the insertion of the arbitrary linguistic sign.[18]

One could posit that this describes, in a roundabout manner, the negation of the following: a collective consciousness (as determined by Kant), the inscription of function, as well as the notion of time in the third dimension (and therefore a reliance on the linearity of the sign), and the partial appropriation of a philosophical framework as a metaphor for architectural discourse. Through the application of a semiotic systemic, the object, which is no longer of architecture, is presented only through its own codification. Architecture is seen here as dissolved through a coloured lens of philosophy which activated the arbitrary linguistic sign as a means of ordering our world.

INTERLUDE 3.0 PROBLEM OF THE PRESENT

> And what a sudden, frightening abyss it opened up in front of us as the computer certainly intimated that it could produce forms that not only do not have precedent, but, more perplexing, may not even have referents! Freedom from semantics, history, and culture was perhaps made possible for the first time in civilization.[19]

-Jorge Silvett

Form in the digital world exists in a 4th dimensional location, one who is removed from the third dimension entirely. The arrival of digital objects into architectural discourse seemingly completes the a-signification so desperately looked for in post-Modern semiotic theory. And, in keeping in mind that what Saussure originally stated was characteristic of a temporal problem of the present, this mode of productivity was diagnosed in a linear manner, from master to apprentice, Eisenman to Lynn.

The language of the sign finds itself being replicated by, or corresponding to, the language of code. However, the exception found within code is that it is able to correspond beyond the linearity of the arbitrary sign, which must be read through a linear series. The language of code has the capacity to, as Greg Lynn has informed us by reformulating a computationally-minded position out of the Eisenman tradition, taking a perspective on the very same shift that Eisenman attempted to outline in his essay referred to earlier;

> Architectural form is conventionally conceived in a dimensional space of idealise stasis, defined by Cartesian fixed-point coordinates. An object defined as a vector whose trajectory is relative to other objects, forces, fields and flors, defines form within an active space of force and motion. This shift from a passive space of static coordinates to an active space of interactions implies a move from autonomous purity to contextual specificity.[20]

This vector-based model is formulated through empirical, mathematical principles, yet has subjected (by the subject) onto its form – or object – the perception that the principle can be read through a language of an arbitrary and varied nature. The object is formed solely by the forces which are dictated to it by the capacity of the technology. The 'blob', as it was so keenly named, was the result of this investigation. It's ultimate variation: determined only by its form, with no implied meaning of the subject. It, I would argue, had no material-based object-hood beyond a diluted and implicit linguistic structure. There is no potentiality between the subject and object because the relationship between them has been dissolved.

Although it seems to be here in the computational turn that we achieve the a-signified object, we can see in the work of Sanford Kwinter. In so far as Klee's Angelus Novus represented progress for Benjamin, the blob represented a death of philosophy in architecture, although it did not present the death of theory, as evident in Kwinter's writing. As digital form became increasingly less material, the technological system which authored it (i.e. the opposite of enabling the potentiality of the subject-object relationship) began to be the focus of the subject. Architecture here is negated, it is a-material, it is soft.[21]

The computational processes of the act of making became central, facilitating the entrance of analogies and metaphors from outside the traditional architectural discourse, and finding root in mathematics and the natural sciences. The production of form was systematised. This signified for Kwinter the potential to break further from the types of Modernism or the fragments of post-Modernism, for their philosophical linearity is superseded by the capacity and potentiality for a non-linear system. Rather than being a product of a relationship between the subject and object, potentiality is now engrained within a system.

We now must look briefly to the computational turn in architecture as a philosophical problem. This reveals itself in being directly recognised as the familiar philosophical problem of the mind and body; or, has it has been discussed here, the subject-object problem. The reading of the subject-object problem finds itself agreeing with the ascertain of Pierre Jacob when he stated that perhaps one could derive "intentionality from function and and consciousness from intentionality."[22]

One may have found it easy to forget by this point in this paper that in Modernism's interrogation of the Classical, and post-Modernism's argument out of Modernism, both negated the influence of *intentionality* on the making process or in the relationship between the subject and object. This indicates that there are several eccentricities implicit in the work discussed here that has come out of these paradigm shifts which remain to be challenged in only the most superficial of interrogations. Let's lay it these on the table, shall we? This paper's commitment to the task of returning to the philosophical origin must be concealed through the very act it aims to dissipate. This act – the act of theorising – enables us to see the failure of our own reason. We aim to ignore our capacity for a Kantian collective consciousness, which is so naturally embedded within our abilities to cognate *potential* and *intention* to the point that we can actively rationalise philosophical distance for the sake of the problem of the present.

However, there could be a way out of the dire apathy for origin, material, form, causality and meaning without having to reconcile with the established distance from the subject and object. This is not to deny the importance of our understanding of principles of computation nor argue against our use of technology in the production of architecture, nor to negate the work which arrived prior. Rather, it is here that I would like to suggest the term *computational craft*, a seemingly paradoxical term functioning as an inverse proposition. We can see this in a few ways. Primarily, one can clearly see that due to and after post-Modernism, we have been unable to comprehend our incapacity to concede to our own humanity. This does not mean to sound prolific, but one must suggest that a slightly alarmed tone is taken primarily due to being shocked at the underdevelopment of the following in philosophy and architecture. It is from Kant that we gain an interest in the first principles of a mathematical, empirical world, but it is also from Kant that we recognise language as a metaphysical sense.

This becomes an inherent contradiction of an application of philosophy to architecture, for finding architectural form within the problem of the present finds that philosophy in a linear sense is exhausted. There must be a return to the Humanist standpoint that there is a material element to the world which cannot be denied. It is not that I wish to continue to find architecture uninteresting. However, it is in the presentation of a neo-Humanist position in reaction to the apathetic disclosure of architecture to a scientific model which emerged from a semiotic model that we find a devastatingly certain closure to Eisenman's tragedy.

Winter 2011

REFERENCES

Alexander, Christopher. "A Much Asked Question about Computers and Design." Speech at 'Architecture and the Computer' at the Boston Architectural Centre, December 1964. Found in the Serge Chermayeff Archive, Avery Library, Columbia University, NY, NY.

Eisenman, Peter. "The End of the Classical, The End of the Beginning, The End of the End". In *Perspecta, Vol. 21.* The MIT Press, 1984.

Eisenman, Peter. "Post-Functionalism". in Michael Hays (ed). *Architectural Theory Since 1968*. Cambridge: The MIT Press, 1998.

Foucault, Michel. 'Kant on Enlightenment and Revolution' (trans. Colin Gordon). *Economy and Society 15* (1). Routledge, February 1986:

Hays, K. Michael. Modernism and the *Posthumanist Subject: The Architecture of Hannes Meye and Ludqig Hilberseimer*. The Massachusetts Institute of Technology, 1992.

Iacob, Pierre. "Consciousness, Intentionality and Function. What is the order of explanation?" *Philosophy and Phenomenological Research, vol.LV, no 1.* March 1995: 195 - 200. Accessed at http:// pierrejacob.hautetfort.com/files/searle.pdf.

K. Michael Hays. *Architectural Theory Since 1968.* Cambrige: The MIT Press, 1998.

Kipnis, Jeffrey. "Introduction" in Eisenman, Peter. *Written Into the Void: Selected Writings 1990-2004.* Peter Eisenman, 2007.

Lynn, Greg. *Animate Form*. Princeton Architectural Press, 1999.

Saussure, Ferdinand de. *Course in General Linguistics*. Open Court Publishing Company, 1986 (16th print, 2006).

Silvetti, Jorge. "The Muses are Not Amused: Pandemonium in the House of Architecture", *Harvard Design Magazine 19.* Fall 2003/Winter 2004.

ENDNOTES

1. Alexander, Christopher. "A Much Asked Question about Computers and Design." Speech at 'Architecture and the Computer' at the Boston Architectural Centre, December 1964. Found in the Serge Chermayeff Archive, Avery Library, Columbia University, NY, NY.

2. This paper defines the subject as the *architect*.

3. Hays, K. Michael. *Modernism and the Posthumanist Subject: The Architecture of Hannes Meye and Ludqig Hilberseimer.* The Massachusetts Institute of Technology, 1992: 5.

4. I refer here to the cult film *The Big Lebowski* (1998) and to the great practitioners of architectural theory in the latter half of the twentieth century, whose fall into obscurity, primarily in the failure to apply theorization to a material practice, this paper is greatly indebted to.

5. Kipnis, Jeffrey. "Introduction" in Eisenman, Peter. *Written Into the Void: Selected Writings 1990-2004*. Peter Eisenman, 2007: vii.

6. Foucault, Michel. 'Kant on Enlightenment and Revolution' (trans. Colin Gordon). *Economy and Society 15* (1). Routledge, February 1986: 88-96.

7. Saussure, Ferdinand de. *Course in General Linguistics*. Open Court Publishing Company, 1986 (16th print, 2006): 67.

8. Ibid: 66.

9. Ibid: 68.

10. Ibid.

11. Ibid: 70.

12. Ibid.

13. Silvetti, Jorge. "The Muses are Not Amused: Pandemonium in the House of Architecture", *Harvard Design Magazine 19.* Fall 2003/Winter 2004: 26.

14. Saussure, Ferdinand de. *Course in General Linguistics*. Open Court Publishing Company, 1986 (16th print, 2006): 68.

15. Eisenman, Peter. "The End of the Classical, The End of the Beginning, The End of the End". *In Perspecta, Vol. 21.* The MIT Press, 1984: 157.

16. K. Michael Hays. *Architectural Theory Since 1968*. Cambrige: The MIT Press, 1998: 522.

17. Eisenman, Peter. "Post-Functionalism". in Michael Hays (ed). *Architectural Theory Since 1968*. Cambridge: The MIT Press, 1998: 239.

18. Obviously, one could continue this discussion through a more thorough investigation into the texts of Deleuze, Guattari and Derrida, but we will only mention their relevance here, in this very note.

19. Silvetti, Jorge. "The Muses are Not Amused: Pandemonium in the House of Architecture", *Harvard Design Magazine 19*. Fall 2003/Winter 2004: 26.

20. Lynn, Greg. *Animate Form*. Princeton Architectural Press, 1999: 11.

21. A soft system is described as "flexible, adaptable, and evolving, when it is complex and maintained by a dense network of active information or feedback loops, or, put in a more general way, when a system is able to sustain a certain quotient of sensitive, quasi-random flow" in Kwinter, Sanford. "Soft Systems" in Boigon, Brian (ed.), *Culture Lab*, Princeton Architectural Press, 1993: 211.

22. Jacob, Pierre. "Consciousness, Intentionality and Function. What is the order of explanation?" *Philosophy and Phenomenological Research, vol.LV, no 1*. March 1995: 195-200. Accessed on December 10, 2010 at http://pierrejacob.hautetfort.com/files/searle.pdf: 8.