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The Interface between Experience and Intuition, or Learning from Icarus

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Hierbij is gevolgd op de relatie tussen ervaring en intuïtie en zijn de linies met de oudheid achteneveel gelaten.

As being both a practicing architect and an educator I am often confronted with the fact that I have to communicate something to my students - namely how to design or create (preferably good) architecture - something, which (I often realize) up to a certain degree, I am not conscious of myself.

Every architect (every artist/creator) I think will know this strange sort of paradox. On the one hand you come up with a design - you created something - but if somebody would ask you "how did you do it?" you would have the problem to explain (on a rational basis) how you actually did it.

O.K. on a kind of conscious level you would be able to retrace the different steps that you made in the design process, the sort of methodical path that you followed, so the syntactical process of continuously thinking, making and testing. But during the evolution of the design, there would also be those somehow enlightened moments, this sort of instant revelations that are very difficult to communicate to others on a basis of reason. Often only in hindsight you realize that those enlightened moments happened and that they were crucial for the design, but you would also realize that during the process of creation itself they often occurred on a kind of sub-conscious or un-conscious level of your thinking.

This is what normally we call intuition. The American Heritage Dictionary of the English language defines intuition as: "The act or faculty of knowing or perceiving without the use of rational processes, immediate cognition. Knowledge gained by the use of this faculty, a perceptive insight. A sense of something not evident or obvious, a distinct impression."

And from the etymology of intuition you can see that the idea behind the term intuition refers to insight gained through contemplation.

In our "modern" society however intuition is regarded as something suspect, something not to be trusted, because intuition is something highly subjective and thus non-scientific. Our "rational" way of being "enlightened", society first and for all values the objective, that which is based on theory, on pure reason, on conscious thought and rational science. In other words that which can be calculated in numbers, time and money and which can be communicated on a methodological level as true knowledge based on objective facts and scientific proof.

But, in my view, our society's over-emphasis on the so-called hard rational facts and figures also produces an imbalance in our valuation system of the "world", so the valuation system of the spatial and cultural environment that we, as humans, create and that we live in. It is however this imbalance valuation system that guides - next to a lot of other things - the production of present day architecture and also pervades its education.

Within our present day society I constantly sense a sort of interest towards the profession and discipline of architecture, as both a practicing architect and an educator. This for instance expresses itself in the almost blind trust that most people have in the so-called specialists and engineers involved with the architectural process, while they are normally rather suspicious about the architect himself. You might say that it is a kind of suspicion for the discipline of architecture in general that I also sense at most technical universities in relation to the education of architects, a suspicion that probably has its roots in the fact that a good architect still has to play a kind of double role.

On one side the architect has to be the objective, rationally acting "building engineer" that knows how to construct a good firm building, but on the other side he should also (still be the subjective, intuitively acting "artist/creator/thinker", that intelligently and emotionally senses how to create a good piece of architecture, bettling the complex spatial and cultural environment it is intended for.

A distrust that becomes even more evident in the education of architects, the moment administrators and managers get involved with the process of teaching. Because for them it is very difficult to understand that the education of architects is not only based on teaching those students a specific catalogue of knowledge and skills, a catalogue (and this is the most important to the administrators and managers) that can be calculated in terms of time and space, people and money, but that there is something much more important than this catalogue of selected knowledge and skills.

And as a dedicated educator one has the problem to explain these realities to these administrators and managers (over and over again) that next to learning a specific catalogue of basic knowledge and skills, the most important in the education of architects (and I don't think that this only counts for architects) is the fact that the student gains understanding or insight in the cultural broadness and complexity of the discipline that he or she studies. And it becomes even more difficult to explain them then, that as a professor of architecture one cannot teach understanding (like basic knowledge and skills), because understanding or insight is something every student has to gain by himself. And as such insight or intuition is by-definition subjective.

In fact knowledge (metaphorically the head) and skills (metaphorically the hand) are aspects of a discipline that can be taught, understanding or insight/intuition (metaphorically head + hand = hart) however is something one has to gain by oneself. But it is in my view exactly by understanding, the acquiring of insight in the "what, why and how" of architecture as a whole and the love for the cultural broadness and complexity of the discipline of architecture that is most important in its education.

Knowledge and skills in fact are specific reflections of understanding, forms of insight that as a whole express themselves as the body of knowledge of architecture. The one - knowledge - from the point of view of architecture as a scientific discipline, so from the point of view of its theory, the others - skills - from the point of view of architecture as a profession (a creative art), so from the point of view of its praxis, and the study of architecture as such becomes a kind of never-ending process of slowly becoming more conscious about deeper relationships between the "what, why and how" of architecture.

And this is also where the "Phenomenological Perspective" of my talk about "Current Architectural Thought and Practice" comes in. Because intuition or insight is something one can only gain through (subjective) experience, and than I mean experience in the double meaning of the word. On one side experience as the act of bodily and mentally experiencing, so the active participation and apperception of activities, events, objects, thoughts or emotions through the senses and the mind. And on the other side experience as the knowledge and/or skill so derived; one could also say the problem of the intuition or the intuition thus acquired.

Experience, as its etymology tells us, means to try. And this is precisely what we can learn from Icarus, we only gain insight or intuition through the act of bodily and mentally experiencing.

I could ask you - as I always ask my first year students when they start hesitating to entrust their first intuitive ideas about a design problem to the paper - can you imagine learning to ride a bicycle by means of the theory of bicycle riding, so via a book that first tells you absolutes
everything about the mechanics, dynamics, movements, physics et cetera, of bicycle riding? And I think almost everybody that thinks back about how he or she learned to ride a bicycle will come to the conclusion that it is impossible to learn it purely theoretically. You simply have to try it, and only through the act of bodily and mentally experiencing it, including all the times one painfully falls down on the ground, one can learn it. This I think also counts for learning to design or create (preferably good) architecture.

Don’t misunderstand me; I will be the last to say that theory is not important; on the contrary. Theory is a form in which specific insight expresses itself through the body of knowledge of architecture, but we can only understand its deeper meaning in the “what, why and how” of the discipline of architecture. We, if badly and mentally experienced and evaluated its practical value in the act of creating or designing.

So to learn to design (preferably good) architecture, you have to almost bodily and mentally experience the act of creating that takes place within the process of designing as such, including all the downs, especially in the beginning, and this over and over again. And remember that creating in terms of design first and for all means bringing your imagination and your actual perception to a point where they start to somehow get in sync with each other.

And I think that everybody will agree with me that the ancient criteria that Marcus Vitruvius Pollio already used to determine if a piece of architecture had quality, still count today:

**Utilitas**  
• a good piece of architecture simply has to function, it has to work well without the user having to think too much about it and it has to serve the program that takes place within it;

**Firmitas**  
• a good piece of architecture also has to have a firm construction, it has to be well materialized and detailed to withstand the forces of nature including time and its structure needs to be cleverly designed so you will be able to build it in a convenient and economical way;

**Venustas**  
• a good piece of architecture not only has to look good it also has to feel good, smell good and sound good, it even has to taste good, if we can use that term in a more metaphorical way in relation to architecture.

Before I asked: what is this interface between intuition and experience? And I tried to show you that it is the creative intelligence of man himself. A creative intelligence generated by men’s ability to perceive and to imagine by means of both body and mind, thus to be able to create and to reflect upon his creations, both ways rational as well as emotional. Now I could add that the interface between intuition and experience is not only the creative intelligence of man himself, but in return also his emotional nature of intuition aspects of ‘beauty’ in an experience, like Scissors did in flight.

Van de ongeveer 1.2 tafelgenoten waren er toch zeker 10 het iets met de uitspraak. De andere docenten waren dat je ontwerpen moest leren van je docent, maar niet alleen van je docent maar ook vanuit andere hoeken. Zoals medestudenten, kennis en workshops. Aangezien erenden hiermee instemden, hebben we al gauw de stelling veranderd naar: Hoe leer je het best ontwerpen van mijn docent?

Kritisch beschouwend moet een docent de problemen binnen het ontwerpproces bij een student bespreekbaar maken en tevens kennis van het ontwerpen bij de student ontwikkelen. Dit kan alleen optimal plaatsvinden als zowel de student als de docent meewerkt. De docent moet oprecht aandacht en tijd hebben voor het ontwerpen en de student, zodat hij/zij met de begeleiding kan anticiperen op de student. De student aan de andere kant heeft de verantwoordelijkheid om tijdens de ontwerpbereiding zelf met vragen of aandachtspunt- en omtrent het ontwerp aan te komen.

Een docent is niet iemand die dingen beslist voor de student, maar die helpt bij problemen waar de student zelf niet uitkomt of iemand die kritische vragen stelt, waar de student zelf een antwoord op moet vinden. Voor deze wisselwerking tussen student en docent is continuïteit van de besprekingen erg belangrijk. Deze continuïteit wordt bevorderd door twee halve dagen ontwerpen te geven, in plaats van een hele dag.

Omdat de studenten optimaal kunnen leren ontwerpen is het noodzakelijk dat zij voor vragen terwacht kunnen bij specialisten die de kennis bezitten over specifieke onderwerpen binnen het ontwerppakket. Docenten kunnen over het algemeen hun eigen vakgebied het best doeren. Wanneer een student met een dedenleproukwijde docent op vragen stuit de bijvoorbeeld gericht zijn op bouwtechnologie of bouwphysica, kan hij/zij daar niet bij zijn docent mee terechtkomen. Echter de student moet tijdens het ontwerpen oogzorg hebben tot deze andere disciplines, hetzij door meere docenten in te schakelen, waardoor hij/zij kan spreken over docenten van een andere vakgebieden en door de gespecialiseerde docenten. Wanneer de docenten in teams werken (wellicht met ook een grotere groep studenten, zodat het aantal docenten per student gelijk blijft) gaat dit een groot voordeel bij de begeleiding. Het is namelijk van uiterste belang dat een docent strikt begeleid en dit vervolgens goed terugkoppelt naar de student. Door het begeleiden met meerdere docenten ontstaat een objectiever resultaat, het terugkoppelen is binnen de begeleiding het belan- grijkst. Memoreel gebeurt dit niet tot nauwelijks, terwijl het juist het moment is, waarop de student echt leert.

Al we kijken naar de verschillende ontwer- ponderswijzen kunnen we dit veel docenten binnen hun lessen al gebruiken, maar van verschillende onderwijsmodellen. Eigenlijk zijn er vier soorten docenten: een docent die spiegelt, een oplossingsaandoenende, een medewerende en een procesbegeleider. Binnen een semester kunnen docenten hierdoor schakelen.

Het begin bestaat bijvoorbeeld uit veelal consulten terwijl later meer als in een studio wordt ontworpen. Dit laatste is vooral wees voor de leerlingen studenten is weggelopen de zelf meer willen weten, meer vragen en langer blijven. Een goede docent is prima in staat zelf zijn/haar naam van begeleiders te benaam, mits daar ruimte voor is. Een montere omelsing van het semester en haar criteria beperkt de docent in het scheuren tussen verschillende begeleidingen.

"Ik leer ontwerpen van mijn docent."  
Rondetafeldebat  
Sanne van Manen