

ARTEFAK
TE DES
ENT
WERFENS

Skizzieren, Zeichnen, Skripten,
Modellieren

Rikke Lyngsø Christensen, Ekkehard Drach,
Lidia Gasperoni, Doris Hallama,
Anna Hougaard, Ralf Liptau (Hg.)

Forum Architekturwissenschaft
Band 4

Universitätsverlag
der TU Berlin

NETZWERK
ARCHITEKTUR
WISSENSCHAFT



OTTO PAANS AND RALF PASEL

The Simulative Stance:

An Essay on Architectural Design as Epistemic Enactment

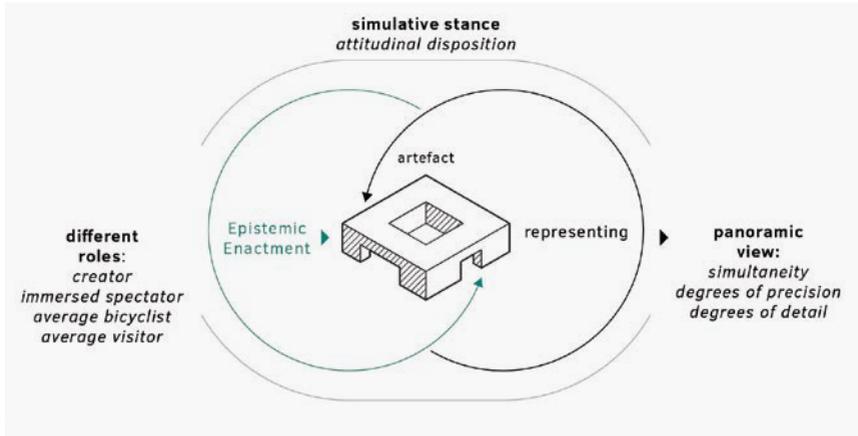
Nowadays, it is by no means eccentric to maintain that architectural design practices may be understood as explicitly epistemic (i.e. knowledge-generating).¹ However, this assertion introduces questions about how this knowledge generation works. In particular, how can judgements and assertions with epistemic value be derived from artefacts produced by these practices? How is it possible to acquire knowledge from them?

In response, we develop in this essay the idea that such knowledge acquisition is enabled by actively enacting different perspectives on a given design proposal. We call this ‘Epistemic Enactment’. These forms of enactment are enabled by an attitudinal disposition we summarily describe: the ‘Simulative Stance’. By adopting the Simulative Stance, various forms of Epistemic Enactment are enabled. This enactment is mediated by the production of architectural artefacts.

Of course, this reading of architectural design processes commits us to certain presuppositions. Notably, we commit to the idea that knowledge is produced by essentially embodied beings, and that generating knowledge is a dual cognitive-affective process in which the body is intimately and irreducibly involved. Therefore, we hold that enactive roles are played out through

1 Nigel Cross (ed.): *Designerly Ways of Knowing*. Basel 2007; author’s translation; Bryan Lawson: *What Designers Know*. Oxford 2004, pp. 117–126; Jennifer Whyte, Boris Ewenstein: *Wissenspraktiken im Design. Die Rolle visueller Repräsentationen als „epistemische Objekte“*. In: Claudia Mareis, Gesche Joost, Kora Kimpel (eds.): *Entwerfen, Wissen, Produzieren:*

Designforschung im Anwendungskontext. Bielefeld 2010, pp. 47–80, here p. 56; Otto Paans: *The Epistemic Potential of Architectural Design. Investigating the Complex Problem of Urban Sustainability Through Spatial Practice*. In: Michael Erhoff and Wolfgang Jonas (eds.): *NERD – New Experimental Research in Design*. Basel 2019.



● Fig. 1: The relations between the Simulative Stance, Epistemic Enactment and the production of process artefact: Otto Paans and Ralf Pasel, 2019

design processes, avoiding the assumption that knowledge production is a process that takes only place in the brain. However, we will – for reasons of convenience – assume rather than defend this theoretical position.

The Simulative Stance and Epistemic Enactment

To analyse architectural objects as carriers of knowledge, one need only accept the philosopher Greg Bamford’s assertion that buildings (and we may extend this to ‘the built environment’) are registers of different types of knowledge.² If we analyse the ways in which these types of knowledge permeate process artefacts (like sketches, 3D models, models, drawings etc.), we can see how knowledge becomes embedded in the built environment.

² Greg Bamford: From analysis/synthesis to conjecture/analysis. A review of Karl Popper’s influence on design methodology in architecture. In: *Design Studies* 23.3 (2002), pp. 245–261, here p. 252.



In everyday life, human beings find themselves confronted with a variety of artefacts and objects. They range from barometers to xylophones, from escalators to chainsaws and light switches. Our spontaneous grasp on how they function often eludes us until the time cease functioning. A new computer program that must be mastered confronts one with assumptions and shortcomings in one's cognition or an insufficient grasp of fundamental skills. What requires explanation is how our skill for handling objects with limited understanding and insufficient knowledge functions. The American philosopher Daniel Dennett proposed that the answer lies in our attitude towards objects. As beneficiaries of the 'Machine Age', we assume that anything mechanical (and digital) will function in certain predictable ways. Buttons are made for pressing, levers for pulling, signs for reading, and screens for providing readable information or touching. The idea of a computer providing feedback on our actions makes only sense if we see it as a machine with a certain logic and procedural structure. Dennett calls this attitude towards machines the 'design stance'. By adopting the design stance, one assumes that a given machine has been purposively designed and that it can be used to fulfil its intended goal.³

If we take this thought one step further, we see that we apply approximately the same technique to human beings: we consider them autonomous agents with a degree of rationality and some overlap with our own psychological dispositions. We do not regard them as mere automata. Instead, everyday human interaction is guided by what Dennett calls the 'intentional stance'. This is the attitude adopted towards beings that have content-filled mental states and an actual inner life. Both these stances are *attitudinal dispositions*: bodies of implicitly accepted assumptions that direct and determine the way the world or its discrete characteristics are perceived and interpreted. This disposition forms the lens through which the world is viewed, determining which features trigger us, and which 'light up' in perception.

3 Daniel Dennett: *The Intentional Stance*. Cambridge, MA 1989, pp. 22–33.



What does this excursus have to do with designing? As architects, urban planners and landscape architects, we design physical environments that combine functional needs, constructive requirements, and infrastructural connections with affects, atmospheres, aesthetics and emotive qualities (often under the heading of 'atmosphere'). These environments significantly determine the quality of life for other human beings. In short, designers must regard the environment as a functional configuration that is jointly operated by numerous human beings. Therefore, it has to make sense to a kind of rational, autonomous agent that is in certain aspects similar to the designer himself. In this sense, designers share a cognitive, psychological and physical constitution with their target group. Historically, this similarity has played an instrumental role in architecture and urban planning: from the 'Vitruvian man' to the 'average family' or 'average individual'. Both architecture and city planning postulate assumptions about such generic and thus fictional characters, using them as points of reference during designing. On one hand, fictional characters enable one to make decisions on their behalf by departing from relatively safe assumptions. On the other hand, the marked disadvantage of this strategy is that fictional characters are often blatant simplifications or even caricatures of the entities they are supposed to represent. The 'average family' has often not much in common with a randomly selected real family.

In designing the built environment, designers combine the design stance and the intentional stance into a compound attitudinal disposition focused towards the needs of target groups that are not intimately known. However, designers share a cognitive constitution and a physical living environment with them. This compound attitudinal disposition is what we define as the Simulative Stance.

Designers consciously and unconsciously adopt the Simulative Stance while creating and interpreting architectural artefacts. It informs their ways of looking at drawings, models, animations, sketches and other process artefacts. It focuses their interest in analysing how other humans use the environment, how technical details are constructed, and how materiality influences aesthetic



appearance. In this sense, the designer internalizes his expertise: he is as it were attuned to the sensitivities of drawings, models or sketches in the same way that a conductor is to the performance of an orchestra. Small, almost imperceptible changes or features acquire meaning when looked at through expert eyes. The attitudinal disposition with which the designer views the world frames his perception, and consequently it determines the meanings he attaches to the properties of the drawing through a process of intellectualization.⁴

At this point, we may deal with a first objection. If the Simulative Stance is an enabling condition for knowledge elicitation, is this not an oversimplification? Is it not again some mysterious property X that eludes explanation, just a different name for what was in former times termed intuition or creativity? To counter this objection, we need some more exposition of the core idea. Therefore, we propose that the Simulative Stance functions through a process called Epistemic Enactment, practised during the production and interpretation of architectural artefacts. In Epistemic Enactment, the designer deliberately and voluntarily adopts a certain perspective towards an idea. The perspective acts as a helpful tool to act ‘as-if’. Temporarily, the designer sees the idea from the assumed position he occupies, acting ‘as if’ he experiences certain features from his point of view. This speculation-driven mode of thinking generates a series of conjectures and inferences that appear relevant from the adopted perspective.

A deliberately adopted perspective affords the simplification to ‘perceive’ and ‘enact’ the features of a given idea more clearly. The abstraction offered by the perspective unlocks new epistemological domains. One must view a process artefact from an

⁴ See for instance: Mario Carpo: *The Alphabet and the Algorithm*. Cambridge, MA 2011. The process of intellectualization at least partially explains the design process – however, it should be kept in mind that this is one aspect of design processes. The design process as such is not reducible to a mere process of intellectualization.



assumed point to extract and/or perceive or notice properties that are only perceptible from that very point of view. The assumed perspective brings some features into focus, while omitting or blurring others.

Epistemic Enactment is a form of active, embodied enactment that consists in the designer switching between multiple roles during the design process. For reasons of space, we discuss here only two roles that seem most obvious at first sight. However, it is obvious that a more elaborate taxonomy of roles could be defined. The authors do not maintain that the two roles discussed here are the only possible ones. Two of these roles will be discussed in the next section.

Epistemic Enactment: Anthropological and Symbolic Languages

The first role a designer adopts is that of a 'creator' in a narrow sense. This does not mean that the designer is reducible to a kind of utterly rational, idealized problem solver. To a degree, this was an underlying assumption that guided the first generation of design theorists in their conceptualization of design processes.⁵ However, if one understands the designer here as an expert in utilizing *different* types of knowledge, as endowed with analytic capacities related to relevant frames of reference, it becomes plausible that his skill-set allows him to adopt temporary, external, quasi-distanced perspective towards the artefacts he creates. In this role he is acting according to a level of knowledge that is kaleidoscopic yet sufficient, operating with artefacts that are not yet completely empirical objects, but that are not completely unintelligible either.⁶ Designers do not have perfect

5 For instance, first-generation design theorists like Herbert Simon, Allen Newell, Charles Eastman and Horst Rittel.

6 Karin Knorr-Cetina: *Epistemic Cultures. How the Sciences Make Knowledge*. Cambridge, MA 1999, pp. 64–65.



knowledge of all aspects of their output, but they have sufficient knowledge to produce generally reliable statements or relatively safe assumptions about their artefacts. This enables them to gradually develop architectural ideas that possess a degree of coherency and intelligibility.

The second role the designer adopts is that of ‘immersed spectator’, interpreting and analysing artefacts from an internal viewpoint, as a participating user. This role utilizes the capacities of the Simulative Stance in a different manner. Instead of being an external expert providing professional verdicts or judgements, the designer temporarily adopts the mental attitude and perspective of a user. He analyses the proposal from a deliberately simplified, first-person viewpoint. The analysis becomes an immersed and subject-oriented reflection that only holds true for certain aspects of the design proposal. By combining an array of different viewpoints, the designer can make qualitative assertions on behalf of imaginary users such as the ‘typical pedestrian’ or ‘typical vehicle driver’.

During this switching of roles, the designer never stops being a designer, even in the most immersed, subjective moments. There is always an element of the creator looking over the shoulder of the immersed spectator. How does the designer adopt these roles with regards to his ideas and concepts? The answer lies in the process of architectural representation, focusing the inquiry around a wide variety of process artefacts (such as models, sketches, 3D models, CAD drawings etc.) in designing. Series of process artefacts jointly create necessary and sufficient conditions for architectural thinking.⁷

Architectural artefacts are structural registers of different types of knowledge, associative chains, atmospheric moods and superimposed insights. However, they are not reducible to either one of the components just mentioned. Two superimposed worlds collide and overlap during designing: the real, physical world with all

7 Alberto Pérez-Gómez: Questions of representation. The poetic origin of architecture. In: Marco Frascari, Jonathan Hale and Bradley Starkey (eds.): *From Models to Drawings*. London 2007, pp. 11–22, here pp. 12–13.



its challenges, limitations and problems, and the idealized world of concepts and ideas: “Through design thinking, [the designer] makes a projection, literally a fore-image of what does not exist, and explicates the possibilities and requirements to realize this futurity. (For example the building plans for a house of the masterplan for a site)”.⁸

Such fore-images are incomplete during the process of conception; they do not represent fully-formed future worlds. Nevertheless, such images are inextricably oriented towards the future. Or, put differently, the envisioning of the ‘ideal’ in the confines of the ‘real’.⁹ The act of projection implies a projection, an overlay of the imaginary on the real. These worlds can be conceived as possible, probable and desired.¹⁰ Some worlds may be desirable, but impossible; other worlds may be possible but undesirable; yet others are possible but not probable. Designing them is a necessary condition to conceive them in their entirety and to gain insight in what they require or offer. The design theoretician Taeke De Jong calls these requirements ‘bestaansvoorwaarden’ (necessary conditions for existing).¹¹ These conditions are not only required for realizing a design, but the process of gradual representation is itself a necessary condition for an architectural idea to develop at all. De Jong rightly focuses on the unity or totality of designed worlds or ideas. It is because of their totality and comprehensiveness that they become instruments of knowledge, as formulated in different terms by the philosopher Jacques Derrida: “But within structure there is not only form, relation, and configuration. There is also interdependency and a totality which is always concrete. [...] Henceforth, the totality is more clearly perceived, the panorama and the panoramagram are possible”.¹²

8 Charlotte Geldof, Nel Janssens: Van ontwerpmatig denken naar onderzoek. In: Roeland Dudal, Katrien Vandermarliere, Dirk Bogaert (eds.) *Achtergrond 3: Architect/Ontwerper/Onderzoeker? Casus Mare Meum: een oefening op zee*. Antwerpen 2007, pp. 11–19, here p. 13.

9 Harold Nelson, Erik Stoltermann: *The Design Way. Intentional Change in an Unpredictable World*. Cambridge, MA 2014, pp. 32–37.

10 Taeke De Jong: *Kleine methodologie voor ontwerpend onderzoek*. Meppel 1992, p. 9.

11 *Ibid.*, p. 10.

12 Jacques Derrida: *Writing and Difference*. transl. University of Chicago. London 2001, pp. 3–4.



The thought Derrida develops here is directed at writing but is just as valid for architectural design. The structuring quality of design determines relations, dependencies and configurations, with artefacts serving as ‘panoramic’ entities. They are panoramic in the sense that a careful juxtaposition and combination of their elements and codified knowledge allows one to see beyond their individual components. Conversely, the same panoramic quality enables one to perceive their potentials and possibilities. Moreover, some artefacts are panoramic in the sense that drawing or inscribing takes literally place on a – sometimes virtual – surface on which elements, ideas and partial ideas are interwoven into larger, composite representations. The panoramic surface allows one to see in one glance the (possible) connections that unite different parts of an idea. To aid this perceptual process, architectural representation employs deliberately schematic means: “Thanks to a more or less openly acknowledged schematization and spatialization, one can glance over the field divested of its forces more freely or diagrammatically. Or one can glance over the totality divested of its forces, even if it is the totality of form and meaning, for what is in question, in this case, is meaning rethought as form; and structure is the formal unity of form and meaning”.¹³

Derrida’s argumentation in this passage is again fully applicable to architectural design: its operations of schematization and abstraction allow the designer to freely explore and compare different configurations and options, each of which has different forces shaping it. Through representation and evaluation, different options are expressed as architectural forms, in turn acquiring meaning for the designer as creator and/or immersed spectator.¹⁴

Observing the ideal world of schematization and spatialization as overlapping and intersecting on the real world sets off new

13 Ibid., p. 4.

14 Robert Somol, Sara Whiting: Notes around the Doppler Effect and other Moods of Modernism. In: Krista Sykes, A. (ed.) *Constructing A New Agenda. Architectural Theory 1993–2009*. New York 2010, pp. 188–203.



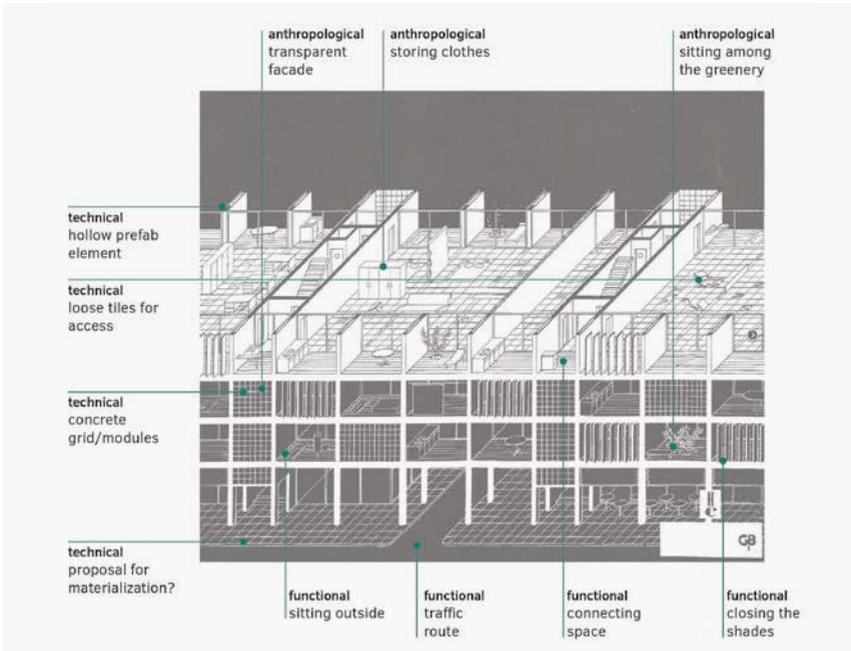
sequences of ideas and thoughts. Such associative sequences enable designers to naturally adopt different interpretive perspectives during designing.¹⁵ It is the contrast between what is visualized and what is really existent that provides the creative impetus to consider different solution types, concepts, viewpoints and spatial arrangements.

Of course, this assertion assumes that representing is a form of enacting. Or alternatively, it equates the activity of representing with enacting – and subsequently thinking or deciding in a design process. How enacting and representing are interwoven becomes apparent in a distinction drawn by the sociologist and literary critic Michel De Certeau. He describes how inhabitants of a residential building may use different descriptions to describe their surrounding by providing a map or a tour.¹⁶ A map is a description of the type “the storage room is left from the corridor”, while a tour is a description of the type “enter the room, turn right, and pass the fireplace”. The distinction between these descriptions can be drawn at many levels. Most notably, the map is operational and juxtaposing: it posits and relates entities with regards to one another on one unified plane (the living room is left of...), while the tour is instructive; it describes sequences of actions that are chronologically ordered (turn right, then walk on...).

During designing these two modes of description exist side by side. Representations are used to generate descriptions that switch between perspectives (external and immersed) and levels of generality. A plan of a neighbourhood may give rise to map-like descriptions of the type “the residential development is planned next to the park”, or “the parking lot is centrally located”. Conversely, perspective visualizations may give rise to tour-like descriptions: “if you move along this route, this landmark building is continuously visible”. Inferences and conclusions of this type directly shape the design process. De Certeau traces the relation

15 Gert Hasenhütl: Zeichnerisches Wissen. In: Daniel Gethmann, Susanne Hauser (eds.): Kulturtechnik Entwerfen. Praktiken, Konzepte und Medien in Architektur und Design Science. Bielefeld 2009, pp. 341–358, here pp. 348–349.

16 Michel de Certeau: *The Practice of Everyday Life*. transl. by Steven Rendall. Berkeley 1984, pp. 118–120.



● Fig. 2: Analysis of different elements in a drawing from the 1990 entry for the Housing and City Competition by Neutelings, Wall, De Geyter and Roodbeen (original image via socks-studio: <http://socks-studio.com/category/visual-atlas/architecture/>)

between perceiving and acting back to narrative acts: the tour *organizes* discursive operations, while the map *totalizes* observations. Put differently, these two poles of experience utilize two languages: an *anthropological language* of felt and lived experience combined with a *symbolic language* of formal, abstract codification.¹⁷

Jointly, these two languages form a working idiom that develops around an object or architectural idea. In turn, they reform the understanding of the designer himself. “The writer’s thought does not control his language from without; the writer is himself a kind of new idiom, constructing itself”.¹⁸ Naturally, inferences expressed in these two intersecting languages are derived from and embedded in representations of various sorts, allowing designers to easily enact alternative perspectives. This

17 Ibid., p. 119.

18 Derrida 2001 (note 12), p. 11.



enactment commences through representing the ‘imagined world’ from different vantage points in anthropological and symbolic languages. The designer in his Janus-faced role as creator and immersed spectator speaks two languages simultaneously. One is symbolic, allowing for abstract, formal representation; the other is anthropological and immersive, allowing for first-person representation.¹⁹

Summarizing the argument: designers practice Epistemic Enactment by switching between roles. We discussed here the roles of creator and immersed spectator. This attitudinal switching is exercised through deliberate representation and evaluation in an integrated developmental process. Epistemic Enactment is in turn enabled by the Simulative Stance. Using this attitudinal disposition, the designer utilizes two different languages simultaneously: a formal, symbolic one that allows for abstracting content, *and* an anthropological one that allows for adopting an immersed perspective. Consequently, artefacts straddle symbolic *and* anthropological domains of expression. As designers switch perspectives, they narrate and specify the architectural object on multiple levels, using these different means of expression.

Comprehending Architectural Artefacts

Still, a further objection can be made in response to the core thesis of this essay. Namely, how can designers comprehend the representations they make as architectural totalities, given the fact that they are not completely reducible to any of their individual components? Does Epistemic Enactment not merely provide designers with a series of snapshots, loose fragments, and partial perspectives of their ideas instead of a coherent view to which epistemic value can be assigned?

The different modes of embodiment in a design process make artefacts semantically saturated environments: they simultaneously contain multiple meanings, stories, relations, and narratives. Each act of redrawing, remodelling or re-interpreting

19 Dennett 1989 (note 3), pp. 154–155.



simultaneously embeds and derives knowledge from artefacts by means of successive representation. It follows that designers must possess a skill, disposition, or method to encode and decode information from artefacts. Jointly viewed, a series of artefacts provides the designer with a panoramic view on the whole and its parts. Together, they constitute a generative plane of representations: what is derived from and read into artefacts is more than what was put into it.

By lining up associations and ideas in a focused, quick-retrieval system, designers can quickly extract what is needed.²⁰ Focusing on a particular theme activates the mind to create more and more associations from memory. This enriches the theme by delving into the mental archives, displaying the retrieved contents on the mental equivalent of a drafting table. By selectively focusing on one detail or operation, the surrounding world is mentally blurred out and recedes into the background. This allows one to access the mental repository in a focused manner.²¹ Precedents, partial ideas, replicable solutions and styles of visualization are compiled into a mental repository of clues and ideas that direct architectural production.²² Designers collect such clues into a ‘working frame’ formed by the problem they address. This working frame becomes over time and by accumulation saturated with different types of content that are recombined and ordered in drawings, sketches and models. This rich content enables designers to understand the issues they work on from different perspectives.²³ The philosopher Hans-Georg Gadamer contends that “questioning opens up possibilities of meaning”, and thus what

20 The neurological basis for this capacity is discussed in: Bernard Baars: *Understanding Subjectivity. Global Workspace Theory and the Resurrection of the Observing Self*. In: *Journal of Consciousness Studies* 3.3 (1996) pp. 211–216; In *the Theatre of Consciousness. Global Workspace Theory. A Rigorous Scientific Theory of Consciousness*. In: *Journal of Consciousness Studies* 4.4 (1997) pp. 292–309; Stanislas Dehaene: *Consciousness and the Brain. Deciphering How the Brain Codes our Thoughts*. New York 2014, pp. 163–165.

21 Michael Polanyi: *The Tacit Dimension*. Chicago 2010, p. 18.

22 Bryan Lawson: *What Designers Know*. Oxford 2004, p. 112.

23 It should be noted that this semantic content is both symbolically and anthropologically embedded, as postulated by de Certeau (note 15). A design proposal may be described according to its properties or materials in a technical idiom, but simultaneously as a place of social interactions or cultural significance.



is meaningful “passes into one’s own thinking on the subject”.²⁴ The content in the working frame is fluid and changes its shape, causing an understanding of the problem that is not reducible to mere problem-solving by ratiocination.²⁵

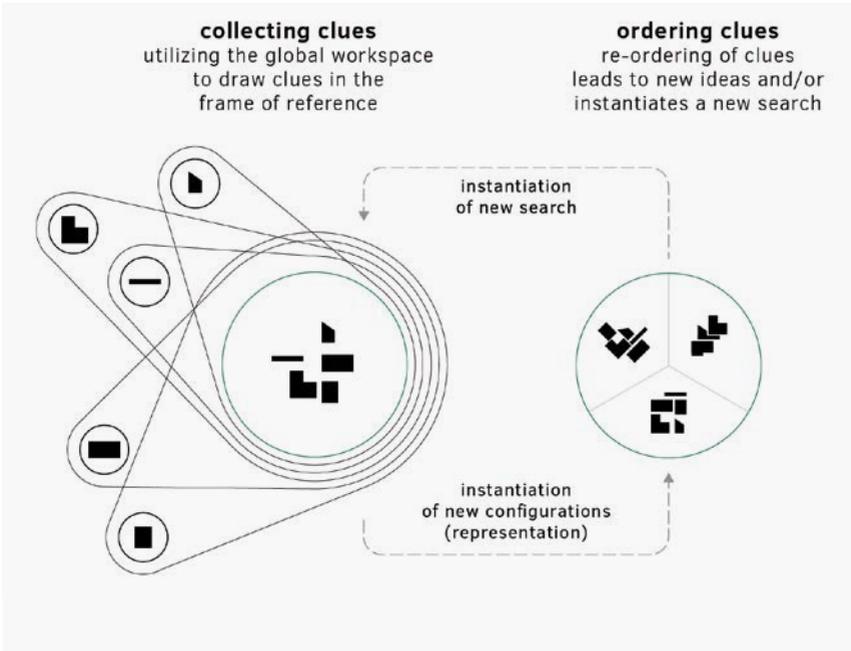
The designer uses his repository of core values and ideas in utilizing symbolic and anthropological languages while designing. The claim by architectural historian Alberto Pérez-Gómez that “architecture is the type of thought that makes good buildings possible” can be read against this background. Viewed together, representations point beyond their immediate content, and towards architectural ideas that can only be allusively referred to by juxtaposing their symbolic and anthropological contents in a series of integrative gestures.²⁶

Accumulation of process artefacts creates a semantically saturated environment of ideas, sketches, quick scribbles, notes, aesthetic details, half-finished models, concepts, technical specifications and diagrams. All these images and models jointly present an architectural idea or vision that can be understood at different levels – constructive, functional, technical or ecological. However, the architectural design process does not just run unambiguously from indeterminate to determinate, or from undefined to defined. Instead, the artefacts contain different types of knowledge and always elude exhaustive description, leaving space for immersion, but simultaneously creating possibilities for deriving knowledge. This “surplus” is constitutive of its epistemic value. The incompleteness of an artefact is its greatest potential as generator of knowledge. Paradoxically, a degree

24 Hans-Georg Gadamer: *Truth and Method*. Transl. by Joel Weinsheimer, Donald G. Marshall. London 2013, p. 383.

26 Pérez-Gómez 2007 (note 7), p. 13.

25 See for an initial discussion on this focusing capacity: Ludwig Wittgenstein: *Philosophical Investigations*. Transl. by P.M.S. Hacker, Joachim Schulte. London 2009, pp. 210–212, 215–217, 219; see also: Pieter E. Vermaas, Peter Kroes, Andrew Light, Steven A. Moore (Eds.): *Philosophy and Design. From Engineering to Architecture*, Heidelberg 2008, pp. 3–4.



● Fig. 3: The artefact as composed of clues and references from different contexts and precedents that instantiate new configurations and searches: Otto Paans and Ralf Pasel, 2019

of imprecision is needed to reach precision or definition at all. The scientist and philosopher Michael Polanyi puts it as follows: „[...] unbridled lucidity can destroy our understanding of complex matters. Scrutinize closely the particulars of a comprehensive entity and their meaning is effaced, our conception of the entity destroyed”.²⁷

This explains concisely why we can read architectural artefacts as comprehensive entities. Due to their semantic saturation, architectural artefacts are focal points and carriers of knowledge in a purposive, exploratory design process. They are focal points because they influence the type of Epistemic Enactment: a technical drawing may lead to technical considerations about how weather-resistant materials are, whether stairs are not too steep, whether the pavement will not become slippery during the

²⁷ Polanyi 2010 (note 21), p. 18.



winter, represented in a highly symbolic idiom. In turn, a large-scale urban plan may lead to considerations about travelling time, the scenography of a route or the distance to the nearest supermarket, represented from a more anthropological perspective. All these considerations are relevant although they are quite disparate.

The clues hauled into the working frame are rough materials to be ordered, connected, weighed, and scrutinized. Every representation is an attempt at ordering, at schematization and spatialization. The dimly perceived final design is the absent core of these evaluations and perspective shifts. Put in other words: representations of all the notions and fragments collectively point towards an idea that remains just out of focus, like a 'de-centred centre' that structures all attempts at definition. Again, in Derrida's words: "By orienting and organizing the coherence of the system, the center of a structure permits the play of its elements inside the total form".²⁸ And, we may add, even if the center of the enquiry (namely an architectural idea in development) is physically absent, it still permits the play of elements surrounding it. To put this play into effect and to utilize it in a directed and purposive way, switching of perspectives, enacting and imagining are necessary strategies. The same can be said of utilizing various symbolic and anthropological languages. In an iterative series of representations, designers attempt to grasp, organize, orient and align ideas and different types of knowledge into coherent, meaningful whole.

Conclusion

The representative process in architectural design affords different entry points enactment by designers, provided they adopt the Simulative Stance. A quick street-level sketch reveals different aspects of an idea than a bird-eye view rendering does. The relationships, interconnections, levels of generality, materiality etc. that are visible in one representation may be obscured

28 Derrida 2001 (note 12), p. 352.



in the other. All these elements are gradually pulled under the heading of one total form or viewpoint through which a problem is addressed. The variety of semantic contents necessitates shifting between various types of knowledge – technical, expert information has to be related to questions about everyday perception, costs, aesthetics, materiality and usage. This enactive process demands imaginative shifts between different roles and perspectives, both symbolic and anthropological.

Nevertheless, the totality of process artefacts and mental representations affords an extremely rich environment suffused with different types of knowledge that can claim a polyvalent epistemic value: namely, a multi-faceted understanding of the design proposal on many different levels.



Bibliografische Information der Deutschen Nationalbibliothek

Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über <http://dnb.dnb.de> abrufbar.

Universitätsverlag der TU Berlin, 2020

<http://verlag.tu-berlin.de>

Fasanenstr. 88, 10623 Berlin

Tel.: +49 (0)30 314 76131 / Fax: -76133

E-Mail: publikationen@ub.tu-berlin.de

Alle Teile dieser Veröffentlichung – sofern nicht anders gekennzeichnet – sind unter der CC-Lizenz CC BY lizenziert.

Lizenzvertrag: Creative Commons Namensnennung 4.0

<https://creativecommons.org/licenses/by/4.0/>

Lektorat: Christiane Salge

Gestaltung: Stahl R, www.stahl-r.de

Satz: Julia Gill

Druck: docupoint GmbH

ISBN 978-3-7983-3090-0 (print)

ISBN 978-3-7983-3091-7 (online)

ISSN 2566-9648 (print)

ISSN 2566-9656 (online)

Zugleich online veröffentlicht auf dem institutionellen

Repositorium der Technischen Universität Berlin:

DOI 10.14279/depositonce-8508

<http://dx.doi.org/10.14279/depositonce-8508>

Der Tagungsband versammelt Beiträge des 4. Forums Architekturwissenschaft zum architektonischen Entwerfen und seinen Artefakten. Die vom Netzwerk Architekturwissenschaft ausgerichtete Konferenz hat im November 2017 an der TU Berlin stattgefunden. Die Beitragenden zur vorliegenden Publikation fragen nach den epistemischen Potentialen von Skizzen, Renderings, Modellen, Fotografien und Zeichnungen beim Entwerfen von Architektur. Sie folgen allesamt der These, dass Medien im Entwurf nicht nur abbilden, sondern ihrerseits Grundlage weiterer Wissenshandlungen sind. Anhand von Fallbeispielen, die vom Mittelalter bis in die Gegenwart reichen, zeichnen die Texte den besonderen qualitativen Einfluss nach, den ‚das Machen‘ eines Entwurfs am und mit dem Artefakt für diesen Entwurf hat. Strukturgebend sowohl für die Tagung als auch diese Publikation war der Versuch, theoretische Positionen und die Ergebnisse praktischen Arbeitens – Artefakte – zusammenzubringen: Die Tagung war verbunden mit einer Ausstellung am Architekturmuseum der TU Berlin, im vorliegenden Band wechseln sich Theoriebeiträge mit text-bildlichen Beschreibungen der gezeigten Artefakte ab.

Universitätsverlag der TU Berlin
ISBN 978-3-7983-2940-9 (print)
ISBN 978-3-7983-2941-6 (online)