Towards a virtual architecture: the mobility of essences and the open in hand in the production-consumption of spaces

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Abstract

This paper explores Pierre Lvy's definition of virtual and its relation to Martin Heidegger and Michel de Certeau, towards an event-architecture. It draws from examples of objects and spaces to question the fixing of essences showing that the use itself, the actualisation of things, can trigger the process of becoming of things essences. This means to take the virtual into account in the design process. This approach shifts the focus of the design from substance to the event, focusing on the virtual to be actualised. In this way there is continuity between production and consumption, not the rupture characteristic of design based on substance. If designers consider the unpredictability of events and are not so controlling as to become restrictive, users will tend to become more creative in their consumption. This indicates the relevance of designing for experience, designing the problem rather than solving it, a design that is open-in-hand.

Biography

Ana Paula Baltazar dos Santos is a Brazilian qualified Architect, MArch, and PhD candidate at the Bartlett School of Architecture, University College London. She is currently working as a researcher at the School of Architecture at the Federal University of Minas Gerais, Brazil, developing interactive interfaces and immersive environments for participative design processes. She has lectured at the undergraduate architectural course at the Federal University of Minas Gerais, and at the graduate programme of Architecture of Interiors at the Catholic University of Minas Gerais, focusing on design strategies towards users participation. She has several articles published and has been awarded three research prizes and two design prizes.

Introducing the virtual towards a theory of an event-architecture

Pierre Lvy articulates the potential, the real, the virtual and the actual in a fourfold system in which he classifies potential and virtual as latent, and real and actual as manifest. Although he does not mention Sigmund Freud, latent and manifest are very much related to Freud's dream-work. The dream-work is the transformation of latent dream thoughts into manifest dream content. It is the opposite of the analysis of the dream (psycho-analysis), which aims to access the latent thought through the manifest content of the dream. In the case of the potential, its latency becomes manifest in the real, when it is realised, whilst the virtual manifests in the actual, when actualised. The analytical process, on the contrary, would lead to the potentialisation of the real and the virtualisation of the actual. The ultimate aim of this paper is to indicate the virtualisation of architecture as a means to overcome the reproduction model and to achieve an event-based design, designing for experience.

An event in this paper is a dynamic system, a happening. Lvy actually uses the word acontecimento, which is best translated as happening. However, happening in English has a
very strong artistic connotation, which is not the direction of this paper. As the word event is the one used by Sanford Kwinter [iii] to talk about the same ideas expressed by Lvy, it seemed a better translation. Thus, an event-based design means a dynamic design based on the idea of people interacting with the environment in order to create it, even if only temporarily.

According to Lvy's system, the virtual is a latent event; it is not opposed to the real, but to the actual, which is a present-time manifestation of the always existent and latent virtuality. [iv] The real, on the other hand, is manifest at the level of substance, and is opposed to the potential, which, tough latent, also belongs to the realm of substance. Lvy stresses the importance of the event as distinct and separate from substance, though both work together in the world. Heidegger defines the Being of the world based on substantiality, and the things of nature as substances—meaning here material—upon which everything is founded. [v] Despite Heidegger's pioneering emphasis on Dasein (Being-in-the-world), considering objects and subjects in context, his system is dedicated to understanding Daseins substance. Nevertheless, Heidegger's ideas on the worldhood of the world are useful to clarify the design process concern with substance.

According to Heidegger, a production itself is a using of something for something. [vi] The first state of things we encounter in the world is present-at-hand, entities to which the question what is it for? has no answer. They are not for something, they just are what they are; they are the world-stuff and have natural properties. Production starts by transforming what is present-at-hand into ready-to-hand; that is, assigning meaning to the present-at-hand by transforming it into something which is for something. A stone and a piece of wood found in nature are present-at-hand, but they can be transformed into ready-to-hand when given an assignment. Heidegger is aware of the event when he indicates that the assignment given to the present-at-hand (be it by means of work incorporated into it or by means of meaning given to it) transforms it, but he focuses on the substantiality of the ready-to-hand, what it became rather than how or why it became. His intention is to understand the thinghood of things in their context in order to understand the worldhood of the world, not to understand how things can be produced in order to change the worldhood of the world.

The ready-to-hand can answer the question what is it for? by being evaluated in its equipmentality, that is, its predicates in the context of its assignment. Heidegger's classic example is the hammer. A hammer is made from present-at-hand material becoming a ready-to-hand piece of equipment in-order-to hammer. If one does not know what a hammer is for, it can be looked at as present-at-hand. Knowing the properties of things, such as their colour, shape and tactility is enough to describe the being of present-at-hand things, but to describe the being of a ready-to-hand piece of equipment it is necessary to know its predicates. Predicates are related to the assignment of the equipment, its essence, which is always connected to the role of the equipment in-the-world, though for Heidegger, different to cognitivism, its intelligibility is prior from its place in the world. [vii]

Looking at the production of a wooden chair it is possible to recognise what Heidegger calls production in terms of Lvy's fourfold system. The wood as found in nature is present-at-hand, which is not for anything until given an assignment. The wood present-at-hand in nature is manifest as real substance, becoming latent substance when potentialised, which can happen when it is cut. The potentialisation is a process in producing resources, for to produce anything from the wood it is necessary first to assess its properties and decide a range of things it can become. The production of a chair is then a process of realisation, transforming the potential wood into ready-to-hand wooden chair, and happens when the producer already knows what the latent present-at-hand will become by making it manifest as real. The realisation of the potential of the wood into a chair is the assignment of the essence of a chair into the wood. As a ready-to-hand realised piece of equipment, the chair
has a predicate which tells us that it is for seating. The chair has an essence, defined prior to its realisation, establishing and fixing what it is for. The production of the chair can be explained as a transformation of substance from manifest to latent to manifest again. When it comes to using the chair, the event comes into play: the essence of the chair can be seen as its virtuality, a latent content, which can be actualised by someone seating on it. The use of the chair for something does not belong to the category of substance but to the event.

A chair can be used to stand on, despite not being for that purpose. In this case, the chair is not potentialised as a stepladder; it suffers no substantial transformation. The original assignment of the chair, for seating, has been abused—to use Ranulph Glanvilles term—at the level of the event. The chair is virtualised, gaining a temporary virtual assignment as stepladder, which is then actualised as one stands on it, without interfering with its substantial predicate as a chair. The essence of the chair is still the same, fixed a priori, and its abuse as a stepladder is only temporary. To the question what is this chair for? the answer will still be for seating. In this example, consumption—to use de Certeaus word—is clearly separate from the production of substance; that is, the process of using or abusing the chair is a consumption, or a production at the level of the event, and does not interfere with the production of the chairs substance.

However, when designing artefacts or spaces, one is often faced with sophisticated requirements, where the event of consumption interferes with the design of substance. An example of such designs is the chaise longue designed by Charlotte Perriand and Le Corbusier. Their starting point was that the chair would have a complex predicate: it is not only for seating but for resting, accommodating different positions chosen by the user. Its essence is not precisely fixed like the wooden chair but has a more flexible assignment. It was carefully designed to enable different uses, even though these uses are predicted and limited by the design. Unlike the wooden chair, the chaise longue is not just a manifest ready-to-hand that can be used as it is found but a latent ready-to-hand which parts are realised but which whole is always potential: the potentialised substance of which the chair is made is realised in the parts of the chair, and these ready-to-hand parts are not merely real, but potential in their role in the chair itself. The design is potential, as it is a set of predetermined possibilities. Moreover, it produces a ready-to-hand that depends on the event, on changing the position of its parts to transform the chairs substance temporarily. The potential is realised for a purposeful use, though the chair itself remains potential for future uses. The event plays a double role in the consumption of this chair: first as the work incorporated by the user to realise one of its potentials putting it in position, then as the actual use of it.

Like the wooden chair, the chaise longue can also be used for purposes beyond its essence. Although it has a more flexible essence, it is still predetermined, with an assignment between seating and resting. Nevertheless, one can abuse a potential chair as much as a real chair. The chaise longue can be used as table and seat, which are not part of its essence, because these are not its purpose. As with the wooden chair, the abuse will characterise a virtualisation rather than a potentialisation, once it does not interfere with the permanent essence of the chair. The transformation happens only as an event. In this case it is the virtualisation of the potential rather than the virtualisation of the real: the chair will be put in an extremely reclined position, realising a potential that was designed for maximum rest, and then used for a different purpose. To use it as table and seat, users have to virtualise the potential, but first they need to position it according to the imagined abuse, and then actualise it by using it in its abused assignment.

Undoubtedly, designing potential rather than real artefacts is a step further in the direction of the event. But it is still limited to fixing essences, to predicting possible uses rather than designing for experience, freeing experience. One example of furniture design that points to
a consideration of the event to a greater degree than the previous examples is the pink furniture by Future Systems. In the previous examples, the essence was assigned and fixed a priori, be it static or flexible. With the pink furniture the essence can be said to be open. It is for use but the use is not defined. It can be described as transfunctional, transcending a predetermined set of functions; neither multifunctional as in the case of the potential design of the chaise longue, nor unifunctional as in the case of the wooden chair. The question what is it for? always has answer, therefore: it is not present-at-hand. Nevertheless, one cannot give a definite answer to that question, which would be a requirement of a ready-to-hand. It can be a seat, a sofa, a bed, a TV room, a party floor. It is only ready-to-hand when being used, once it suits the use and can be said to be for that purpose. However, it is just temporarily in this condition of certainty, when its use is whatever currently it is being used for, not for a prescribed function. The indeterminacy of the event is part of the design; although this piece has substance, it is a virtual object rather than merely potential or real. The virtuality is neither a mere natural consequence of use nor an abuse but a constant latent feature of this piece of furniture. This sort of virtual object requires a third Heideggerian category which essence is latent, not previously fixed, and emerges as it is actualised; something like open-in-hand.

In Heidegger's understanding of production, the event works in two ways: first when giving the present-at-hand an assignment, second when using the ready-to-hand, actualising its virtuality. Although he emphasises the event as dependent on substance and secondary in the production stage, he defines production as the using of something for something, which does not limit it to the production of substance, be it manifest or latent. Despite his focus on substance, the event is also a production, once it is the use of something for something, and this must be carefully understood, as even in phenomenology, there is the danger of falling into the reproduction model if the role of the event is overlooked and substance overemphasised.

For Heidegger phenomenology is a method of investigation that considers things as phenomena in themselves, that is, which looks at the essence of things rather than their manifest appearances or semblances. Although he acknowledges that semblance and appearance are founded upon the phenomenon, he stresses the need to understand phenomenon as the showing-itself-in-itself, while semblance is that which looks like something but in fact is not, and appearance is the indication of something which does not show itself, such as a symptom of a disease. However, both semblance and appearance manifest themselves through prior phenomena.

One of the greatest dangers of reading appearance and semblance as phenomena is to mistakenly understand substance as if it was an event. In architecture, phenomenology has been interpreted by some architecture historians drawing upon Heidegger's phenomenology without reading it phenomenologically. That is, they describe their subjective emotions, sensations or feelings before an architectural monument as if these feelings were architectural phenomena, which they are not as they are mere appearances produced by what Heidegger calls reference-relationship between the historian and the monument. To use Heidegger's own terms, architecture is what does the referring (or the announcing), and in order to do so it has to be a phenomenon itself despite what it appears to be in the eyes of the historian or other visitor in a given moment. As a phenomenon itself, architecture stands independent of and prior to interpretation, although different interpretations can be added to it bringing it to be seen as what Heidegger defines as appearance or semblance founded upon the phenomenon, though not the phenomenon itself. This distinction is very important if one is not about to commit two mistakes: a) to take substance for an event; that is, architecture itself is not to be described by means of an event it is not, which is related to the historian subjective relation to it; and b) to ignore the role of the event and focus only on the description of the buildings physical properties.
The overemphasis on substance is also explained with Sanford Kwinters description of the classical morphogenetic model that is determined by the relationship of the possible to the real. [xvi] The morphogenetic model does not take time and the event into consideration. Kwinter describes the relationship of the possible to the real according to two controlling rules: resemblance and limitation. In his view, possible finds itself invariably placed in opposition to real as if it were some type of earlier stage; it has on its own, therefore, no reality in the strict sense, but takes this on only at a later stage, through the process of realizing itself. [xvii] When the possible is realised the real always conforms to, or matches the image of the possible, thus the rule of resemblance. But not everything possible can become real, the possible is always more than the real, so to become real the possible suffers limitation.

The morphogenetic model regards substance only, and is similar to the reproduction model. This theory of appearances and semblances supposes a world given in advance, not one which is dynamic and constantly becoming. It isolates parts to make sense of the whole. However, the whole becomes inaccessible if the parts always represent or reproduce isolated fragments from a non-existent static whole. When isolated, the parts belong to a static past and not to the present. This view is related to form, appearance, and is always reductive, restrictive and static, ignoring the constant transformation of subjects, objects and environment in their present-time interaction. Its fallacy can be explained by the interrelationship of substance and event: there is no substance at work alone; the event is always at work. The actuality of the world, its constant becoming, is not a direct consequence of its possibilities but depends on choosing what becomes real. This choice to realise one potential rather than another is related to the event, the relationship of the virtual to the actual, which is in constant play alongside the relationship of the possible to the real. A dynamic model includes the relationship of substance and event, which is always present in everything we do, create and perceive. As the world is dynamic, then we should consider this model consciously when designing things. The process of design is generally defined in terms of representation, which leads to overemphasis on substance, the morphogenetic or reproduction model, without considering the consequent reduction from a dynamic to a static view of production.

While Heidegger focuses on what there is in the world, looking at the present connected to its past, this paper focuses on designing spaces to be used in present time, looking at the present connected to an indeterminate future. Thus the event needs to be more carefully investigated. De Certeau provides a better understanding of the production at the level of the event, looking at consumption as a hidden production, a present-time production, assuming its tactical nature. [xviii] This production does not manifest itself through its own products, but rather through its ways of using the products imposed by a dominant economic order. [xix] He argues that many, often remarkable, works have sought to study the representations of a society, on the one hand, and its modes of behaviour, on the other.... [But] it seems both possible and necessary to determine the use to which they [these social phenomena] are put by groups or individuals. [xx] In other words, he is concerned with the event and their invisible or hidden productions rather than the representations or visible products given to consumption and peoples representable behaviour detached from the dynamics of the production by consumption. According to Luce Giard, de Certeaus theoretical task on the practice of everyday is not related to the cultural products offered on the market but it regards the operations that make use of them. [xxi] These cultural operations that are movements and not given, can be seen in the crossing of the event with substance. The invariable a priori of essences gives place to the mobility of essences, which are only temporarily assigned when products are consumed, that is, produced by actualisation. Although every consumption has this tactical nature, the way products are designed plays a relevant role on it.
The mobility of essences and the idea of intentionality

The design of products and of spaces often assigns a fixed essence, which can be flexible but predictable, as seen in the above examples of the real and potential chairs where representing the predicted use in terms of substance restricts their actual use. With the pink furniture, the essence is not fixed and the use itself, its actualisation, is more flexible in that it is not entirely predicted and represented as substance. The latter example takes into account creative use, when consumption is intended in the design as a continuation of production. This approach shifts the focus of the design from substance to the event, focusing on the virtual to be actualised. In this way there is continuity between production and consumption, not the rupture characteristic of design based on substance. If designers consider the unpredictability of events and are not so controlling as to become restrictive, users will tend to become more creative in their consumption. This indicates the relevance of designing for experience, designing the problem rather than solving it, a design that is open-in-hand.

In the process of consumption, everything has a natural virtuality and a natural actualisation. Nevertheless, the main focus of design has been to realise potentials: designers often establish the design problems to be addressed, then solve them. The event is considered when establishing the problems to be addressed, but used simply to define the average use for functional purposes. The event itself is not designed; it is a consequence of the design of substance: when the designed product is used, it is always actualised, always an event, even if restricted by its design. The main difference between designing substance taking the event into account and designing the event itself may be addressed in terms of intention: the intention of designers to solve problems by predicting actions and creating their correspondent objects, or their intention to worry about problems by creating open-in-hand objects to trigger new actions.

Jean-François Lyotard relates intentionality to the essence of things, arguing that the truth of phenomenology is constantly in movement, according to the interrelationship of subjects and the situation.[xxii] This leads him to demonstrate that subjects find themselves constantly and by essence embedded in the world, triggering situations.[xxiii] He then concludes that in fact a new location for the psyche is achieved, which is no longer interiority but intentionality. For Lyotard, intentionality is an inevitable bridge between the subject and the situation. The essence of both objects and actions are addressed in their interrelationship, in terms of intentionality.

Milton Santos writes that between the action and the object there lies the intentionality.[xxiv] Santos develops his argument as to indicate the reciprocity between the efficiency of the action and the adequacy of the objects. Then, the intentionality of the action works together with the intentionality of the objects.[xxv] These statements seem to point to a single thesis beyond the mistaken epistemological approach that works with pure concepts and isolates objects from practice. Although they consider the interrelation of objects and practice, in fact they can be interpreted in two ways: first as the prediction of practice in the object, and second as a freeing of practice through the object.

Santos points to the first way, based on the Heideggerian ready-to-hand. In Santos thesis the functionality of the object is established a priori, the essence of the object is fixed, and cannot be changed without reducing its efficiency, which he considers a death threat to the object.[xxvi] By altering its functionality, the object becomes something else, which is not intended in the design; there is a separation between form and content, destroying the unity of the object in its practical context. This view applies to the design of objects and spaces that are intended as substance, potential or real, when the designs assignment is always functionally limiting. This sort of design fits the reproduction model, by reproducing and
fixing the intention of the designer in terms of substance, to be used precisely as it was intended. In this case, the event is predicted and reproduced in the design of substance; the experience is designed, controlled by its very restriction. To benefit from this design the user should know precisely what it is for. The use is therefore a reproduction of designed intentions; there is no continuity of the design into its use.

Lyotards thesis points to the interrelationship of subjects and situations, but it also implies the first way when ignoring the relevance of the relationship of the virtual to the actual, stating that essences belong to the realm of the relationship of the possible to the real. For him, the essence is invariable and is merely a pure possible, ... though this possible precedes the real.[xxvii] Besides his strict definition of essence as invariable, which tends to be interpreted as always fixed, a better clarification of Lyotards concept of essence and its relation to Lys fourfold system needs to be done. The essence, if looked at in the realm of the relationship of the virtual to the actual, is not always fixed though existent a priori in its latent virtuality. It must be said that Lyotard defines essence as invariable in the context of their disclosure to the subject. That is, one can only grasp the essence of the yellow by imagining the colour in the world, in context, in a surface; any colour is unimaginable apart from the space in which it presents itself. Ones imagination works as to make the object colour variable in order to grasp its essence apart from the way it presents itself. However, due to the impossibility to imagine a colour without its extension one achieves what Lyotard calls consciousness of impossibility, [xxviii] which would reveal the essence of the object, its invariability. The process of variation of ones imagination allows the identification of the invariable feature of the object—that which is tangential to the consciousness of impossibility. The invariable, then, is not a fixed predicate of the object but a subjective means to grasp the essence of the object. In Lyotards definition of essence with the example of the yellow, the process of imagined variation arriving at the invariable concerns substance—the relation of the possible to the real. However, if the essence of the object is not fixed, as in the pink furniture, one must also regard the event in this process—the relation of the virtual to the actual. The invariable, then, is neither a property nor a predicate of the object, but a subjective imagined limit, which may be substance or event-based. Thus, in Lyotards theory of essences it is also possible to accommodate intentionality according to the second way.

The second way of interpreting the role of the event in the design is indicated by the already mentioned pink furniture. In this case, the intention of the design is to enhance users experience. The intention is not of a reproductive nature; the design does not fix a precise function, but leaves it open to the users intention. Intentionality is regarded in this case as an interplay between objects and action which aim is to free practice through the object and not to predict it in the object. This second order intentionality leads to designing the virtual, the open-in-hand; designing that which triggers events that are not previously known, instead of predetermining the events. These events are not functional prior to their use, but open to whatever function arises when in use. The intention of the designer is designing for experience; it acknowledges the unpredictability of the users intention, establishing continuity between design and use. The product is open-in-hand; it is a latent event.

**From designing the experience to designing for experience**

There are distinct ways of considering the event in architecture, and some examples will indicate the role of the open-in-hand in event-architecture. The first and most considered place of the event in architecture is consumption—to use de Certeaus word. The consumption of space is always an event as it emphasises the dynamics of interaction rather than the static features of a space. According to Merleau-Ponty, the experience of space ultimately depends on bodily movement and action and concerns the interaction of the user with the space.[xxix] This embodiment of space cannot be reduced to visual perception.
Every space is a lived space; our perception of space is in constant transformation according to the whole context, including our own transformations. Lived space is never static but we are not usually aware of its transformations. Our failure to perceive every lived moment as unique and different than the previous or the next one, leads us to a generalised perception based on habit. In our consumption of architecture, if the degree of restriction imposed on the design is too high, we interact with the building in a very habitual manner, not paying attention to it as an event in constant transformation according to our interaction and interpretation. Thus, architecture is perceived as ready-to-hand with a fixed assignment; there is a clear match between the intention reproduced in space and the intention of the user of space. However, if the design is not produced as ready-to-hand, its consumption can be creative, beyond habit, in which case the event is not regarded as mere consumption, and a continuous movement connects design and use. In the open-in-hand, the event is latent from the production stage.

I now consider the place of the event in the production of architecture, ranging from simple predictions of use reproduced in the design, through more complex analysis of movements generating the form of space, to the extreme case of designing the event towards freedom of use. Buildings often take the event into consideration by predicting it, but not often as the main focus of their design: many times the formal solutions are given more importance than the actual use or happening of the building. Everyday spaces, such as houses, offices, and the urban space itself, are designed to accommodate habitual patterns of use. These spaces reproduce in their configuration a specific and predetermined way of use. Form matches function, substance matches the event. These spaces are designed to solve specific functional problems; they are ready-to-hand, realising a specific assignment. However, some cases require a more flexible design solution, for instance, the client for Gerrit Rietvelds Schröder house (1924, Utrecht) wanted rooms for each of her sons but also a clear integral space when the rooms were not required, so Rietveld designed sliding and folding partitions accommodating these two states and a variety of compositions between them. The result of the design is a potential house, realised according to the clients needs. Although it is ready-to-hand, its design does not realise a permanent assignment. Like the chaise longue, the design predicts a range of possibilities; its substance is always latent, waiting to be realised when put in position. Yet despite the flexibility, the variety of configurations is predicted: the house reproduces a flexible but specific programme of uses.

Many architects are shifting their attention to the event. Bernard Tschumi is probably the architect who most focuses on architecture as event as opposed to architecture as form. Tschumi indicates the dynamics of events in contrast to the static of forms: it is not important what the building looks like, but what it does. Although he takes into account the relevance of use to architecture as a dynamic system and consequently to its design, stating that architecture—its social relevance and formal invention—could not be dissociated from the events that happened in it, he also controls this use by predicting it in the design. Tschumi defines event as a particular item in a programme, and programme as a combination of events, a descriptive notice, issued beforehand, of any formal series of proceedings. He clearly indicates the reproductive character of events and programme for his architecture. An example of his strategic way of including the event in the design is the use of movement notation. The representation of movement in order to generate form can advance the investigation of the event in architecture but does not guarantee event-architecture. In Tschumi's case, the event is still defined beforehand, not latent and virtual, but represented and made manifest in substance.

A built example of the event represented in substance took place at the Venice architecture Biennale in 2000. The American exhibition connecting Asymptotes and Greg Lynns work was generated through movement notation. Hani Rashid of the firm Asymptote describes the exhibitions design as a process of using a technique for interrogating the body, drawing
on Eadweard Muybridge's photographs of movement, the futurists' representation of movement, and Man Ray's Marcel Duchamp descending a staircase. The mapping of the trajectory of a body in the space of the pavilion determined how the exhibition would be built. The movement of a body in the real pavilion was recorded and reproduced as a digital model, which was then built. In this case, bodily movement defines the space, but it is a literal reproduction of a past movement. The basis of this present architecture is a past event, not future unpredictable events. According to Tschumi, events should be taken into account in the design process as a means to disturb perception, which implies a certain continuity between design and use. Nevertheless, in the American exhibition the event which is taken into account was limited to a single performance of a body within the pavilion: a mere static diagram of past movement. This event ceases as it is reproduced in a static diagram to be reproduced in the structure of the exhibition. There is no consideration of a continuous movement, but a crystallisation of an event shaping substance.

Looking at the American exhibitions design process in terms of substance and event, we can say that the pavilion where the movement was recorded is real and the movement itself is an event. The recorded movement is an attempt to cross the event with substance to make a more event-based structure. However, as the movement is frozen and reproduced in the structure of the exhibition, it ceases to have its dynamic latent effect and is crystallised again as manifest substance. When static diagrams of movement are built as architecture, they incorporate movement in themselves only by accident. This process has an almost naive quality, as it starts by considering in detail the bodily movement in the space and ends up generating a new space from the mapped trajectory of the body in the first space. The new space generated by representing the trajectory differs from the first space, and will never be used in the same way. This project ends up creating a static space based on a single bodily perception of another space, which only limits the new space rather than broadening its possibilities. The unusual final visual form of the exhibition is more effective in stimulating a non-habitual perception of this space than the intention of the design: what destabilises the user is more visual than experiential.

An almost opposite result can be expected from Kas Oosterhuis design Trans-ports. Trans-ports is a complex project, the viability of which physical structure is still under investigation by Oosterhuis. Trans-ports is defined by Oosterhuis in two ways: as an installation designed for the architecture Biennale in Venice in 2000, which is in fact a group achievement of architects, artists, programmers and users alike. This installation works as a multiplayer game environment, where 16 sensors are activated as visitors walk around the physical environment. These sensors work as a collective mouse connected to a game run simultaneously in three computers. Each computer is connected to one projector displaying 120 degrees of the digital world of the game. Thus, as one visits this environment one is automatically playing the game: the visitors are recreating in real time the environment they are themselves part of.

The second way of describing it regards Trans-ports as a physical active structure that can change its form and content in present time, which is not yet built. In this case, Oosterhuis is proposing that the multiplayer game environment described above would trigger structural changes in the physical environment. He proposes one way to achieve this changeable structure: Trans-ports project is a web-like construction consisting to a large extent of fully programmable, hydraulic cylinders which extend or retract in response to transmitted pulses. The structure behaves like a muscle. A hybrid between the multiplayer game environment and the changeable physical structure was presented by Oosterhuis and Bouman as the Trans_Ports 2001: a visitors pavilion for the Rotterdam harbour with the possibility of other active structures in various other major harbour cities, all connected through the Internet.
Trans-ports is a constantly changeable space for present-time events, which takes account of the visitors presence and response to the environment, external information such as weather, global maritime activity, images of activities in other harbours (in the case of the Trans_Ports 2001), and other data from the Internet. The space is conceptualised as a pro-active living system integrated through the Internet. This system is designed to enable people to really interact with the physical structure, from inside and outside, generating a present-time effect of change in both digital and physical features. The interaction of visitors changes the digital environment triggering changes in the physical structure, which is in fact an active structure: a device like a muscle that relaxes when external or internal forces are modest, and tightens when the forces are fierce. The dimensional range of substance is almost unlimited between its minimum and maximum size; substance is latent, thus potential. But what really defines the temporary states of the system is the event, based on the interdependence of structures, physical and digital, and people.

The three examples discussed above summarise three different ways to take the event into account in architecture. First, and most adopted, is the prediction of possible uses and their representation in the design. This is the case of the Schrder house, which though a good example of flexibility, has its design based on substance: the architect predicts and designs every possible situation; designs every potential to become real when used. The dwellers of this house can play with a range of possible configurations of the house, but there is nothing truly open to their completion. There is no virtual to be actualised, but potentials to be realised. The second example, the American exhibition, shows a complex analysis of movements generating the form of space, in which case the event is taken into account in the design process. However, this project is event-based only in its design process, and its result, the space this event-based design generates, is as formal and finished as most substance-based architectures. It restricts even more users experience than the original space where the performance that generated the movement notation happened. The third example, Oosterhuis project, is the one in which the event is that which is designed towards freedom of use. In this case the event is not predicted or represented; it is not crystallized in a finished building form. The event is rather something unknown to the architect and to the user, something to long for. This unknown event can only be designed if the architect is open enough to not give finished assignments to every element designed. In the case of the Trans-ports this means to design an event without designing the final experience of the user; the architect is no longer the author of a finished building to be experienced by users, but the author of an interface with which users can simultaneously design, build and use the space. The space actually emerges only temporarily as it is experienced. The architect designs a responsive system, in which the answers are not predetermined but depend on external input (external dynamic data, such as the weather, and also the way people interact with the system).

Thus, the difference between the Schrder house and Trans-ports is not only a difference in degree, or in how they take the event into account, as the former is a substance-based design and the later an event-based design. Also, despite the apparent similarity of the ideas behind the American exhibition and Oosterhuis project—both event-based in process—their approaches are rather different; perhaps even more disparate than the Schrder house and Trans-ports, as the house privileges the continuity of the design into use, even if by predicting possible uses. As shown above, the American exhibition ends up privileging form in its attempt to approach the event, while Trans-ports form is a present-time unpredictable result of the event. Apart from incorporating movement into architecture by literally making the building move, this project exemplifies considering the event as a continuum from design to use, between production and consumption, and designing a space open-in-hand.

Event-architecture is not an architecture that works as a background for the happening of
events; it is not designed as substance conditioning events. It is an event itself, a situation constructed as it happens. What the building looks like is not important, nor what it does, but what it unpredictably becomes. The virtual and not the real or the potential should be its main focus. The performance and not the representation is the heart of a true relation between substance and event, when the event is facilitated by substance and not reproduced in and determined by it. Digital technology must be taken not as synonymous with the virtual, but as a means towards the event-architecture, enabling a continuity between design and use towards the open-in-hand.


[iv] The expression real time is often used to mean simulation or representation of duration rather than what is happening in the present. To avoid misunderstanding, the expression present time is used here instead in order to emphasise the simultaneity of the happening, not just its duration.


[vi] Ibid., p. 100.


[viii] Ranulph Glanville, Variety in design, in http://www.univie.ac.at/constructivism/papers/glanville/glanville94-variety.pdf, p. 6, defines abuse in the context of the use of computers and software as unusual and unanticipated use.


[xi] For the pink furniture (dinghy, 1996) see http://www.future-systems.com/design/design_14.html


[xv] Ibid.


[xvii] Ibid. This view is similar to Lvys.


[xix] Ibid., p. xii.

[xx] Ibid.


[xxiii] Ibid., p. 55, my translation.


[xxv] Ibid., p. 76, my translation.

[xxvi] Ibid., p. 80.


[xxviii] Ibid., p. 17, my translation.


[xxxiv] Ibid., p. 104.

For the US Pavilion at the 2000 Venice biennale see Asymptotes website <http://www.asymptote.net> under installations + exhibitions.

Hani Rashid, lecture at the Bartlett School of Architecture, University College London, 23 November 2002.


Ibid., p. 59.

Ibid., p. 64.
