The Moment of Environmental Ethics; the Moment of Drift?

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Abstract

The question of whether architectural creativity is more of an artistic or engineering nature is one with a long history but also one with no conclusive answer. The art camp would argue that technology should be treated as a means towards and end, and that technology alone cannot give meaning to our lives. The engineering camp on the other hand would argue that good problem-solving results in better ways of living our everyday lives, and that this in turn brings about a beauty of its own which is beyond that offered by conventional aesthetics of beautiful objects. This dichotomy, among other things, epitomises the inconsistent relationship between architectural design value systems and those of other arts; for although they share certain concepts about beauty and the role of each discipline's creative products in enhancing their audiences' and users' lives, the influence of other 'outside' disciplines on architecture and other more applied arts can have an effect on diverting their value systems. Put differently, architectural value systems do not consistently parallel those of other arts.

This paper looks at some key moments in modern architectural history to show the degree to which architectural value systems share—or otherwise—the values of the other arts and then extend the survey to the present-day emergence of environmental ethics in architecture. It argues that the factual, non-ideological sound of environmental ethics may be promising, but it also signals the arrival of another period of drifting architectural and artistic value systems: one in which, perhaps not for the first time, the ethical is not invested in any kind of semantics and aesthetics of the product itself, but in the processes of its formation and, importantly, in the life-enhancing possibilities of the work.

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Introduction

The aim of architecture is the creation of the perfect, and therefore also beautiful, efficiency. … The architect who achieves this task becomes the creator of an ethical and social character; the people who use the building will … be brought to a better behaviour in their mutual dealings and relationship with one another.

(Bruno Taut 1929: 9)

In his 1976 'Post-Functionalism' Peter Eisenman criticises architecture for not following other arts in breaking with the five-century old Western humanist tradition towards a modernist sensibility of displacing humans from the centre of their world. He cites 'the non-objective, abstract painting of Malevich and Mondrian', 'the non-narrative, atemporal writing of Joyce and Appolinaire', 'the atonal and polytonal compositions of Schoenberg and Webern', and 'the non-narrative films of Richter and Eggeling' as stylistic manifestations of the modernist sensibility whilst architecture, he argued, was still stuck in humanist ethical positivism of form and function, which were in fact symptoms of a late phase of humanism rather than an alternative to it.

Eisenman's argument thus not only highlights the inconsistencies between the ways in which architecture and other arts relate to their age's value system, but also reminds us of the historically persistent centrality of form/ function binary

and whether any form of architectural ethicality is conceivable beyond this binary. The present paper recognises the complexities and differences of the ways in which each creative discipline relates to its age's value systems as well as recognising the inadequacies of the form/ function conceptual binary at least in its traditional sense, but it also recognises the significance of function—in whatever way it is defined and whether or not in its traditionally perceived opposition against form or as one aspect of a more complex whole—in defining what is ethical in any given creative discipline, notably in architecture. The present-day environmentalism, thus, can be seen not only as one of the major influences on the age's ethical thought on a more general level, it can, more specifically to our argument, equally be a major influence in defining what the function of architecture should be. In other words, compliance with environmental requirements may well become the central criterion for ethically judging the products of creative processes in disciplines such as architecture. This distances architectural ethics from that of less applied arts reigniting the question whether or not architecture is chiefly an art by its nature.

In what follows we will look at two key figures in two key moments in modern history to see how the relationship between art, architecture and ethicality has evolved, and then carry on the survey

to the moment before the widespread rise of environmentalist ethics in architecture to better highlight the impact of environmentalism in creative value systems particularly in architecture.

The Rise of the Modern: Gottfried Semper

Semper writings have a clear ethical voice, arising from his concerns about some then-current methods used in art and design and also because of his suggestions of criteria for judging creative work. He believes that the goal of art is perfection and that individual creativity has a key role in achieving it. He is concerned about the inappropriate use of technology in architecture, the over-estimation of the role of technology and construction, the replacement of the value of authenticity with that of fashion and shock, and the problems associated with artistic academicism.

The Duty of Art

Semper assumes that the goal of art is the same as that of religion: 'the absolution of the imperfections of being, the leaving behind of earthly affliction and struggles with the perfect' (1860: 197). Beauty is the magic by which the soul is so impressed that it is 'completely possessed by the work of art'. It is not constituted of a series of unrelated but effective 'moments'. Rather, such 'moments' either emanate from the beautiful object or are at

least closely associated with it, and must 'arise from and be consistent with the law of nature'. He develops an analogy between the general laws of configuration in nature and in art: the beautiful object must be designed in accordance with natural beauty and its principles (198).

The Role of Individual Creativity

Although Semper admits that individual creative power is limited by the laws of tradition, demand and necessity, he believes that the free will of the creative spirit is the most important factor in creating architectural styles. Any emancipation from mainstream styles 'could only be the result of an awakened self-confidence, fortunately reacting against the feeling of merging submissively into the collective and being subjected to a domineering tutelage' (1869: 280). In his view, reconciliation with the old is justified only as long as no one has proved himself 'capable of endowing architecture with a suitable new dress'.

Nevertheless, he believes there is a lesson to be learnt from non-European arts: artists must not neglect the usefulness of their works in order to make them individual statements. Explaining his observations of the London 1851 Great Exhibition, he mentions that despite the perfection of Asian crafts in terms of technical-aesthetic beauty and style, they are not merely means for their makers'

self-expression: 'although an object destined for the marketplace is prevented from achieving great significance, this individual expression is always obtainable to a certain extent as long as the object has some usefulness or intended purpose and does not exist simply for itself' (1852: 141–2).

The Relationship between Architecture and Technology

Semper criticises the view that architectural forms must be determined by features of building materials and construction systems. Instead, he sees nature as the great teacher of architecture. But although architecture must 'choose and apply its material according to the laws conditioned by nature', it must go further by embodying ideas in itself. In his view, the selection of suitable material for building will result in a beautiful and well-expressed work using 'the material's appearance as a natural symbol'. Nevertheless, once 'allied with antiquarianism', materialistic thinking about architecture leads to 'strange and fruitless speculations' and overlooks 'the most important influences on the development of art' (1851: 102).

He observes how technological advances have made possible pushing the treatment of materials beyond their natural capacities: 'machines sew, knit, embroider, paint, carve, and encroach deeply into the field of human art, putting to shame every human skill' (1852: 134). Nevertheless, he is suspicious about this then-emerging abundance of means because it is so seductive that designers may end up forgetting their social concerns: the new technological means are so powerful that a failure to master and direct them towards a human architecture is likely. On the other hand, technological possibilities are in danger of being sacrificed in favour of using established styles. Semper calls these two extremes the Scylla and Charybdis, 'between which we must steer to gain innovations for art' (1852: 135).

Criticism of Artistic Academicism

Semper criticises artistic academicism for the fact that academies train art graduates, not creators of proper art. In his view academism results in four problems: firstly, 'the purpose of the product is seldom manifested artistically'; secondly, 'the achievement lags far behind the intention'; thirdly, 'ornamental trimming is generally misunderstood and too often either merged with the main theme or bears no relation to it'; and finally, 'there is frequently an uncertainty in the appointment of architectural forms and proportions, combined with an arbitrary mixing of conventional architectural types' (1852: 147).

In his criticism of academicism, he also points out his other concern about artistic creativity: the lack of a meaningful

relationship between the purpose of the product and the forms and ornaments used to express it. Failure to achieve a meaningful relationship between them, for which he blames academicism, results in arbitrary rather than meaningful art.

Criteria for Judging Works of Art

Semper believes that a proper judgement of works of art needs 'inward criteria', the lack of which will result in judgement based on custom and fashion. One should seek signs of authenticity and 'genuine excellence' rather than the accidental and extrinsic features of a work, and not be misled by dazzling and striking effects. Proper judgement must first and foremost take into account the artist's own interpretation of his or her own work. On the other hand, he warns artists not to impress the audience without having anything worth saying, or to stick to temporary fashions. At the heart of an artwork must be a genuine timeless substance. This is what really matters, not the ability to shock, or respond to current taste.

Semper's work has an ethical content in that, firstly, it asserts a duty for art, and secondly, it prescribes criteria for judging works of art, but more importantly, in that he clearly defines what is wrong and what is right and hence to be achieved. His attempt to strike a balance between individual freedom and a purposeful,

meaningful art is the most important aspect of his value system but his tendency towards the authentic, and his quasi-religious perfectionism distances him from a modernist stance.

Modernism at its Tipping Point; Le Corbusier

Compared with Semper's Le Corbusier's ethical thought has a more specifically architectural sound. It does, nevertheless, not only represent a quintessentially modernist attitude, but also one also applicable to his as well as many of his contemporaries' art. Like those of William Morris before him, his ethical notions about architecture are influenced by the social realities of his time, in this case established industrial society. With the social responsibilities of architecture still a key issue, Le Corbusier feels freer than Morris, however, to sever the link with history, consider good architecture as a potential promoter of the good society, welcome machines, and impose his new architecture upon nature and old cities to emancipate architecture from its restrictive ties to them.

The Social Responsibility of Architecture

In Le Corbusier's view architects can improve society by their work. Thus their responsibility expands from building to a wider social duty. Le Corbusier was 'an avid and attentive reader of works

proclaiming that mankind could be made better through art' (Kruft 1994: 396). For example, in his 'Architecture or Revolution' Le Corbusier maintains that 'the various classes of workers in society to-day no longer have dwellings adopted to their need; neither the artisan nor the intellectual. It is a question of building which is at the root of the social unrest of to-day: architecture or revolution' (1923: 8). The architect, in short, may prevent revolution by good housing design. In Le Corbusier's view, the architect is a quasi-religious saviour of mankind. As Hanno-Walter Kruft summarises it, 'in his role as supreme creator, the architect, elitist by destiny, makes the laws of universe into reality and establishes a harmony with the cosmos, relieving the world of tension and rendering revolution superfluous' (399).

The Need for a Rational Approach to Architecture

While he maintains a belief in personal freedom, rationality plays a key role in Le Corbusier's ethical concerns about architecture. He stresses the importance of plan in forming a rationalist design:

> The plan is the generator. Without a plan, you have lack of order, and wilfulness. The plan holds in itself the essence of sensation. The great problems of tomorrow, dictated by collective necessities, put the question of 'plan' in a new form. Modern life

demands, and is waiting for, a new kind of plan, both for the house and for the city. (1923: 2–3)

He stresses the importance of economic forces, believing that economic law unavoidably governs our acts and thoughts (Jencks 1977: 190), and also the importance of structural and technical logic in the formation of architecture: 'structural systems determine architectural systems. Technical processes are the very abode of lyricism. There is a modern spirit which is a process of thought and which determines a new architecture' (Le Corbusier 1930: 73). His observations of vernacular architecture are also from a rationalist point of view. As he explains, what he learns from vernacular architecture is not its formal language but its rationality:

> Inspired by the spirit of honesty, I search in the past and in the present, in my own country and in other countries, in my own race and in others, for vernacular houses, human houses for human-man and spirit-man, which are shining exhortations, marvellous examples of efficiency, economy, lyricism and intelligence. That is the one school in which I shall look for Masters on the day when my task is to construct the house of the machine age. I shall find my clue in cold analysis. At each stage my duty will be to put the question: 'Why?'

Nothing has any right to exist which cannot give a precise answer. Modern science brings us a new construction. (74)

Although rationality is very important to Le Corbusier, he is aware that it alone is insufficient for architecture, and maintains the belief that there is more to architecture. It is an artistic activity which goes beyond utilitarian needs, 'a plastic thing' (1924: 4):

The Architect, by his arrangement of forms, realizes an order which is a pure creation of his spirit; by forms and shapes he affects our senses to an acute degree and provokes plastic emotions; by the relationships which he creates he wakes profound echoes in us, he gives us the measure of an order which we feel to be in accordance with that of our world, he determines the various movements of our heart and of our understanding; it is then that we experience the sense of beauty. (1)

The Value of Standardisation and Mass Production

Le Corbusier sees standardisation and mass-production as modern ways of improving people's lives. Therefore architecture must be standardised: 'architecture operates in accordance with standards. Standards are a matter of logic, analysis and minute study; they are

based on a problem which has been well "stated"' (1923: 4). He prescribes mass production as a spiritual benefit:

Mass-production is based on analysis and experiment. Industry on the grand scale must occupy itself with building and establish the elements of the house on a mass-production basis. We must create the mass-production spirit [,] the spirit of constructing mass-production houses [,] the spirit of conceiving mass-production houses. (6–7)

In order to have mass-produced buildings, which he finds necessary, we need to get rid of all residues of past architecture and adopt a purely critical and objective point of view. This will enable us to produce 'House-Machines': healthy and beautiful houses whose beauty is comparable with that of working tools and instruments in that they are direct answers to their expected functions. He associates physical health in the built environment with moral health in society and gives a moral value to these 'House-Machines' for leaving history behind and fulfilling the real needs of people, such as health (7).

For Le Corbusier machines are ideal models for architecture in that they offer rational solutions for problems. These machine-based models go beyond mere problem-solving tools and pose a new

machine aesthetic. As Kruft (1994: 397–8) puts it, 'he regards architecture as the aesthetic of engineering and as expressive of the laws of economy that brings us into harmony with the laws of the universe'. Thus instead of nature, machines become paradigms for architecture. Le Corbusier urges architects to learn from liners, airplanes, and cars:

> Every modern man has the mechanical sense. The feeling for mechanics exists and is justified by our daily activities. This feeling in regard to machinery is one of respect, gratitude and esteem. Machinery includes economy as an essential factor leading to minute selection. There is a moral sentiment in the feeling for mechanics. The man who is intelligent, cold and calm has grown wings to himself. Men—intelligent, cold and calm—are needed to build the house and to lay out the town. (1923: 127)

Geometry over Nature: The Ethics of Order

Le Corbusier believes that primary forms are beautiful because they can be clearly perceived, and praises engineers for using them (2). Nature is no longer the source of formal imitation: designs must be abstract and geometric, as in his proposals for geometric-grid cities built on open sites. In his descriptions of future cities,

he urges architects to impose geometry on the rather accidentally-organised road networks of old cities:

> Geometry is the foundation ... [and] machinery is the result of geometry. The age in which we live is therefore essentially a geometrical one; all its ideas are oriented in the direction of geometry. Modern art and thought—after a century of analysis—are now seeking beyond what is merely accidental. Geometry leads them to mathematical forms, a more generalized attitude. (1925: 11–12)

Emancipation from History

Although Le Corbusier studies vernacular and historical architecture to learn from them, he believes in breaking with the past. For example, he believes that a new modern urban planning comes with the new architecture: 'an immense, overwhelming, brutal step', which 'has destroyed the links with the past' (Kruft 1994: 400). He proposes the demolition of old towns and their narrow streets and historical centres (400) and announces the birth of a new style which is specific to the new age and has little to do with past styles:

> A great epoch has begun. There exists a new spirit. There exists a mass of work conceived in the new

spirit; it is to be met with particularly in industrial production. Architecture is stifled by custom. The 'styles' are a lie. Style is a unity of principles animating all the work of an epoch, the result of a state of mind which has its own special character. Our own epoch is determining, day by day, its own style. (Le Corbusier 1923: 3)

Le Corbusier's value system can be described as quintessentially modernist in social terms, echoing other creative disciplines in its quest to break with the past and its mission to transform society through art. Seen from his time's perspective, however, his use of engineering and his urge for a rationalist approach indicates how technology and its associated rationale are gathering momentum in shaping architectural ethics, the way they are incorporated into this creative discipline may well be judged as a matter of aesthetic choices from a more recent perspective.

The Pre-Environmental Period: Information-Age and the Question of Creativity

Whether information-age values have an element of modernist revivalism is open to debate. However, the development of post-humanist values in the age's creative disciplines has parallels with environmentalist ethics in terms of the latter's questioning of humans' centrality in the world. What follows is a survey of the key features of this age's creative value systems and how they can be realised in architecture.

The Question of Aesthetics

The relevance of the term 'aesthetics' to the information age is in dispute. On one hand it is argued that in the age of simulation the whole world is being aestheticised (Mike Gane 1991: 101, Baudrillard 1992: 10, and Neil Leach 1999: 5–7) and even apparently anti-aesthetic creative approaches conceal essentially aesthetic ones (Leach 10–13). On the other hand, though, artists are urged to leave conventional aesthetic concerns behind and embrace emergent criteria for creative activities. For example, Celia Larnor and John Hunter (1995: 25) argue that conventional notions of function and aesthetics may have no place in cyberspace because an altogether new way of experiencing the world may evolve from it: more interactive and non-determinist, in which the relationship between author and audience is not necessarily linear. This is a result of post-humanism: 'the decentralisation of human existence contains the potential for a new form of psychic entity—marriages of minds based on a multiplicity of simultaneous in-space unions'. They see such fusion as the basis for a new aesthetics based on creative interaction between minds working in what they call 'massive parallel'—a term

borrowed from computer science, where it means linking high-powered computers to work in tandem on a particular problem. They list the qualities of the information age, including multiplicity, interactivity, and non-linearity and the dissolution of the individual subject as the creator of artworks, and describe the new aesthetics as having no single transcendent principle:

> We are not dealing with the fixed truth/beauty principle of old, but with a mobile aesthetic based on a nebula of truth particles pulsing around hotspots of creative energy…. The old vision of culture based on a linear grand narrative is displaced in favour of an instantaneous dynamic consciousness. Thus it is in the quality of the interactions that this participatory dynamic makes possible that the aesthetic is to be found. (27)

The replacement of the abstract aesthetic of the past with new information-age creative models based on action and interaction is also discussed by Roy Ascott (1999: 86–7) who argues that the advantage of applying computers and networks in creative activities goes beyond their data-processing power; more important is the interactivity they allow not only between people but also between people and machines. Interactivity brings together different modes of thought, imagination, and creativity and thus boosts cultural

diversity. This in turn results in new modes of collaboration from which new cultural forms emerge. He sees interactivity as a means not for homogenising differences but for enriching them. Furthermore, information-age thought, he argues, has provided the opportunity to think of architecture as less an abstract aesthetic discipline than a creative activity concerned about occupants' lives. He criticises Western architecture for being more concerned about appearance and structure than about the life in the building: 'There is no biology of building, simply the physics of space'. In his view, designers are mainly concerned about the physics of buildings. But for everyday users, the city is more than just a set of pretty façades: 'a zone of negotiation made up of a multitude of networks and systems. The language of access to these processes of communication, production and transformation is more concerned with system "interfaces" and "network nodes" than with "traditional architectural discourse"'. He believes that one can find the same attitude in contemporary art in general:

> Art is no longer about appearance, or representation, but is concerned with emergence, [and] apparition. … The end of representation is nigh! Semiology is ceasing to underpin our structures. Buildings will *behave* in way consistent with their functions,

rather than speaking their role by semiological implication (1995: 39–40).

Scott Lash sees this shift from representation as a feature of the information age, and traces back the questioning of representation to the questioning of traditional subject–object dualism. He cites Bruno Latour for whom nature and the object are 'transcendent' in the sense that we do not construct but discover them. The subject on the other hand is 'immanent', which means it can be constructed. Latour sees the dualism between transcendent object and immanent subject, in which one can represent the other, as an Enlightenment myth. The alternative model which, Latour argues, has never been realised in Modernism, is based on the interpenetration of the representation and the represented (Lash 2002: 51–5).

In Lash's view the information age is the age of 'presentation' rather than representation (90). While representation is to do with the transcendence and abstraction of the represented, presentation descends to the real world and lived experience, and deals with real-time flow of information. He sees cinema and photography as examples of representation because they 're-present' something that belongs not to now but to the past. The new media (for example TV and the Internet) on the other hand are

real-time and convey information whose value is short-term.

Hans-Georg Gadamer (1990: 116) also contrasts presentation with representation. As Lash puts it:

In presentation meaning is not created by the disembedded and individualised subject, but inheres in situated ongoing practices or activities. … The aesthetic is not a property of a subject to be externalised in art but instead inseparable from the *Sittlichkeit* [morality], and the *Sitten* (or habits) of the community. What counts in presentation is not the contingency, the *tabula rasa* of immediate experience or *Erlebnis*. It is instead *Erfahrung*, in which experiences are neither immediate nor there to be ascribed meaning via the transcendental reduction. In *Erfahrung* experiences are never immediate but ever already mediated through tradition, memory and practice. In presentation aesthetic experience stands out from the flux of signifiers, of impressions, not because it is the expression of the interiority of a creative and self-enclosed subject … [but] because of its relevance to the *Erfahrung*, the background assumptions, the prejudices of everyday life. (90)

Similarly, Michael Speaks (1998: 297) draws a parallel between the departure from representational creativity towards less representational creative modes and the philosophical shift in understanding

the work from a literary point of view in the philosophy of Jacques Derrida to the more immediate media/image-based understanding of Gilles Deleuze. He observes that Derrida's interest in 'issues of representation' and 'reading and writing older texts and offering new readings' of those texts, is reflected in deconstructive architecture's understanding of buildings as texts which are to be 'read and rewritten in built form'. On the other hand, instead of rereading and rewriting existing traditions, Deleuze begins 'in the middle' and produces 'concepts as if they were forms or as if they were new things in the world'. Bernard Cache (1998: 297) calls this immediate method 'thinking with images' in which 'the problem is not to represent that thinking' as the thinking is already in images. In his view representation involves linguistic thought on one hand, and the visible objects of the world around us on the other. He cites Deleuze's books on cinema as an example: they contain no criticism or interpretation of film directors but instead Deleuze 'classifies the various ways directors think with image'. Cache's preference for a Deleuzian approach, he says, is because like Deleuze he is more interested in 'the relation between language thinking and image thinking' than in classical questions of representation.

Also Mark Taylor and Esa Saarinen mention the current shift from representational towards non-representational, and see it as parallel with the shift from literary- towards media-based thought, which they call 'imagology'. In their view, Deconstruction not only marks the end of 'the Western metaphysical tradition' but also signals the start of a 'post-print culture'. However, although it questions print culture, they argue, Deconstruction remains bound to this culture whereas their suggested 'imagology' moves from print culture towards 'the world of telecommunication technology'. They find such a shift necessary because this is the only way to radically transform the traditional notions of the signifier and the signified (1995: 'Framing the Fold' 5).

The interest in applying diagrams as starting points in design echoes this general tendency to move away from more abstract stereotypes towards more bottom-up alternatives. Gerrit Confurius (2000: 4–5) associates the current rise in the use of diagrams with 'the shift from an industrial society, organised around work and production, to the fragmented and ever-changing configuration known … as "post industrial society"':

> The diagram frees the designing process of formal decisions, making room for the necessary preliminary work. It delays the problem of form, postponing its completion as long as possible. It frees design from a tendency toward fixed typologies and

permits the collective to be conceived anew: no longer as the organisation of the masses, but as the allowance of patterns with greater diversity.

Also notable is the capability of diagrammatic methods in emancipating creativity from the constraints of representation, mentioned in Axel Sowa's (1999: 48) observation of the work of Deleuze and Félix Guattari:

> For thinkers like Deleuze and Guattari, the diagram is a pilot: The fact is that an abstract or diagrammatic machine does not function to represent, not even something real, but it builds the real to come, a new type of reality. So it isn't outside of the story, but rather 'before' the story, where it delimits points of creation or potentiality.

Sowa differentiates diagrammatic from linguistic approaches in that diagrams are not semiologically loaded. They are thus free of pre-established meanings and allow fresh experiments that question the conventional vocabulary of architecture.

John Rajchman (1998: 216–7) contrasts diagrammatic methods with the classical composition of fixed elements in well-formed or organic wholes. Diagrammatic methods 'work through connections in multiple disparate spaces, allowing for relations of mixture, hybridity, [and]

contamination … [and] let unforeseen things happen rather than trying to insert everything into an over-arching plan, system, or story'. These methods help prevent the idea of function being absorbed or negated by a purist aesthetics and merely identified with predefined programmes.

To sum up, information-age creative models can be best described as rejecting homogeneity and fixity of rules and principles, and representation. Instead, they tend to be bottom-up and allow principles to emerge as the work evolves. In this sense, despite their possible association with information-age technologies and computers, these models tend to engage more with the lived experience and thus evoke what has so far been repressed by the dominant representational models.

The Possibilities of the New Medium

The developments in information technologies transforms computers' role in creative disciplines to one allowing alternative platforms outside the human mind and thus escaping from the constraints of materiality, and capable of dealing with complexities without any need for simplification. Information-age values, aesthetics, and ethics, are based largely on these emancipatory aspects of information technologies. According to Richard Coyne, digital narratives often take resistance as a central tenet:

'if information technology concerns representing space and the objects in it, it is also concerned with violating the constraints normally associated with the world being represented' (1999: 76). He quotes theorists such as Michael Benedikt, William Mitchell, Michael Sullivan-Trainor and Douglas Rushkoff, who all believe that there is a way to overcome the constraints of physical space through information technologies. For Benedikt (1991: 128), the principles of ordinary space and time can only be violated in cyberspace. For Mitchell (1995: 37), cyberspace makes possible for the first time the disconnection of physical movement and the phenomenal motion. Sullivan-Trainor (1994: 264) and Rushkoff (1995: 13) see information-age virtual reality systems, and their possibilities for interaction, as capable of altering people's perception of space and time and emancipating them from the limitations of distance. The computer thus can become a means to freedom 'either by overcoming the constraints of space, violating its laws, or presenting us with ever larger spaces in which to move' (Coyne 1999: 77).

The Role of Theory

In the information age the linearity of the relationship between theory and creativity—the idea that theory always precedes and informs practice—is questioned. When creativity is left to machines or is shared with them, or

becomes an outcome of interaction between a group of people or, as Deleuze and Guattari put it, the outcome of machinic processes whose production is for the sake of production (Colebrook 2002: 55–61), it is difficult to assume a predefined set of theories as the basis of creativity. This difficulty is discussed by Carol Gigliotti (1999: 56) who sees aesthetics as no longer theory-driven but developed from what is in the outside world, because digital aesthetics is involved with 'constant acknowledgement and inclusion of the realities of use'.

Lash (2002: 49–50) associates theory's lack of status in the information age with the age's reflexive quality and sees it as a development of Kant's idea of 'reflective judgement'. Kant sees cognitive reason and determinate judgement as having 'very specific limits'. To come to terms with these limits, one requires not determinate but 'reflective' judgement, in which 'it is impossible to subsume the object under a concept for the subject'. For Kant, aesthetic judgement is reflective—a judgement in which 'the subject is no longer able to subsume the object under a concept or a pre-given rule': it has to find rules as to how to contemplate the object. As the object 'it is only perceived as if through a glass, darkly, via "empirical" experience with nature, art, or other cultural objects', there is no way to directly access and grasp it 'as a thing-in-itself'. Thus there is

always a degree of uncertainty and risk in the relationship between the object and the subject: 'the more we monitor the object, the more the object escapes our grasp. … The more we try … to order and make a coherent biography of our life narratives, the more they spin out of control'.

The Information Architectural Values in Practice: the Example of UN Studio

The work of UN Studio, particularly in their earlier days, reflects many aspects of information age values. They reject semiology, history and context as the main driving forces of design. Computers and diagrams are thus the ideal tools to develop alternative design methods, whose outcome is not predictable, and see present changes in the role of architects as a starting point, resulting in new obligations for architects to commit themselves to interactive, collaborative design methods in which they are team members but at the same time involved in a wide range of duties (2001: 458).

Ben Van Berkel of UN Studio sees his role in the group as that of a modern as opposed to a traditional conductor:

John Cage … is not in front of his orchestra, but is moving among it. In turn, he has positioned his musicians not in front of the audience, but in varying positions. He knows every part of the score, which is not to say

that everything is necessarily under complete control, but the action of performance, of the design process, is in the shifting juxtapositions of all the players. (1995: 7)

They go beyond modern functionalism in that their design process allows and encourages more interaction between the parties involved. They see this interaction as crucial, especially in present-day large-scale, multi-client projects in which the complexities of the job make simple reactive responses to the brief ineffectual. They also see 'preconceived ideas about urbanism which precede knowledge of the specific location, programme or users' as equally ineffectual in the current context, and believe that an interactive design process enables architects to avoid such abstractions (1999: 23).

Their 'principle of Inclusiveness' rejects fixed organisational order which in their view can originate both from an individualist artistic attitude towards certain forms of organisation and from a typological attitude which tries to adopt forms from the building's context. In both cases, they argue, these preconceived forms of organisation impose themselves unduly on programme and construction. In response, they propose their principle of Inclusiveness prescribing an approach in which no formal organisations exist *a priori*. They see their design process as a consistent whole 'within which

fragmentation and difference occur'. This is different from design methods based on fragmentation and collage in that, they argue, these techniques are still based on organisational coherence (1998: 90).

They believe in the emancipating potential of machine-led or machine-assisted design:

> In our architecture we acknowledge the fact that space may be subject to evolution, expansion, inversion, and other contortions and manipulations that go beyond the generic space that was the ideal and ultimate achievement of modernist architecture. New mediation and computational techniques now at our disposal enable the deepest understanding of endlessness ever possible. The tantalizing new spatial conditions suggested on every computer screen, result in a general familiarity with the potential of a multidimensional spatial experience. Generic space—which used to be an expression of the sum of spatial conceptualisation—seems rigid, static, and limited compared with the potential of spatial arrangements that follow the diving, swooping, zooming, slicing, folding motions that take place on computer screens. (Van Berkel and Bos 1998: 93)

The application of computers together with interactive design methods lead UN Studio to dissolve both entirely artistic and typological design methods into interactive methods whose capabilities are enhanced by computers. This is also achieved by using 'neutral' diagrams, which replace pre-established patterns in designing spatial organisations[1]:

> The essence of the diagrammatic technique is that it introduces into a work qualities that are unspoken, disconnected from an ideal or an ideology, random, intuitive, subjective, not bound to a linear logic, qualities that can be physical, structural, special or technical. (1999: 54)

In Patrik Schumacher's view, in a rational process, decisions are hierarchical, ranked, comprehensive, decidable, coherent and decomposable, whereas the work of UN Studio cannot always be cast in such an ideal mould. Referring to the work of Herbert Simon (1997), Schumacher notes that wholesale abandonment of rationalism and the theory–practice cause-and-effect relationship is not possible. But with UN Studio rationalism instead becomes more dynamic and complicated: absolute rationality gives way to 'bounded rationality' and the 'good enough reason' (1999: 36).

The Environmentalist Ethics: The Engineer's Turn?

The above examples represent changes in architectural value systems and their associated ethics in some key moments in modern history, but they also show consistencies throughout these moments, notably for our argument, that there are commonalities between architectural values and those of other creative disciplines and that the incorporation into architecture of each age's technology and its associated rationale is a concern. The latter can be said to have its equivalents in the form of environmental-awareness and the application of environmental-friendly techniques in design. As Iñaki Abalos (2009: 14) puts it:

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> New technical building codes … entail a major modification of building practices … to replace 'construction experience' with parametered environmental modelling entailing the engagement of physicists, ecologists and engineers, just as it was possible a few decades ago to see a sudden engagement of structural engineers.

The core values of environmentalist ethics are those of minimising harm and waste caused by the ways we design, build and use our built environments, and on that basis the environmentalist stance can be considered as less ideological and more responsive to real, urgent treats to our

wellbeing, promising a universal ethical framework. On the other hand, though, this very factuality and urgency resulting in its institutionalisation, together with its required new forms of engineering input distances environmentalist architectural ethics—and those of other applied creative disciplines such as design for that matter—away from that of other creative disciplines, where the discipline's nature and/ or scale of products are not so that they can consume significant resources and inflict significant environmental harm. In other words, it is not so much the meaning the work of architecture can give to its users' lives that is providing them more efficient, less wasteful ways of life that is at the heart of environmentalist architectural ethics: something that might sound alarmingly insufficient if architecture is seen as a discipline with a duty to go further beyond.

Notes

1. Although the choice of diagrams is itself arguably not neutral but intentional.

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