

Women's 'nature' and architectural design

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In this article I examine the startling work of Leonard Shlain on the provenance of certain 'natural', cortico-neurally based predispositions on the part of women as opposed to men, and offer an interpretation of his work regarding the potential contribution of women architects (and male architects who adopt this 'feminine' approach) to architectural design that would be commensurate with the 'natural' disposition described by Shlain. Care is taken to point out that Shlain does not advance a neurological determinism, instead arguing that neurological predispositions carry specific associations with different social values. Having set out Shlain's argument, I then proceed to examine the work of the Iraqi-born architect, Zaha Hadid, as exemplifying the kind of complex, non-reductive 'intertwinement' of distinguishable analytical and holistic qualities which Shlain associates with the 'feminine'.

Key words: Shlain, 'natural', right- and left-brain, architectural design, Zaha Hadid

Vroue se 'natuur' en argitektoniese ontwerp.

In hierdie artikel ondersoek ek die verrassende werk van Leonard Shlain oor die gronde van sekere 'natuurlike' brein- en neuraal-gebaseerde predisposisies by vroue, soos onderskeibaar van mans, en bied 'n interpretasie van sy werk ten opsigte van die potensiële bydrae van vroulike argitekte (sowel as manlike argitekte wat hierdie 'vroulike' benadering volg) tot argitektoniese ontwerp, wat versoenbaar sou wees met Shlain se beskrywing van sodanige 'natuurlike' dispoisies. Daar word egter sorg gedra om uit te wys dat Shlain geen neurologiese determinisme voorstaan nie, in die plek waarvan hy argumenteer dat sekere brein- en neurale predisposisies met bepaalde sosiale waardes geassosieer word. Vervolgens word die werk van die Iraakees-gebore argitek, Zaha Hadid, ondersoek ten einde te demonstreer dat dit eksemplaries is van die soort komplekse, nie-reduceerbare 'vervlegting' van onderskeibare analitiese en holistiese kwaliteite wat Shlain met die 'vroulike' assosieer.

Sleutelwoorde: Shlain, 'natuurlik', regter- en linkerbrein, argitektoniese ontwerp, Zaha Hadid

The question of women and architecture may be approached from different perspectives. One could, for example, catalogue in an encyclopaedic manner some of the contributions that women have made to the discipline worldwide, or here in South Africa as architects or as historians/theorists of architecture (Ora Joubert and Lindsay Bremner come to mind). Alternatively one could focus on a specific, acclaimed woman architect and her renowned designs or buildings, such as, for example, Zaha Hadid. Either of these approaches would yield much of value, but although I shall focus on the work of Hadid for purposes of demonstration in due course, I would like to slant it in a certain direction; hence the title of this paper, namely 'Women's "nature" and architectural design'.

However, before I get there, I must specify that I have chosen an unusual angle of incidence – one that addresses the 'natural' human capacities (specifically 'feminine' ones, in the inclusive sense that also encompasses certain 'feminine' characteristics on the part of men) that make architecture possible as an art and a discipline. In the process I hope to draw attention to the tremendous 'natural' (note the scare quotes) potential that women have for dealing creatively and imaginatively with spatial modulation via architectural design. I shall argue that Zaha Hadid's work – which has earned her the first *Pritzker Prize for Architecture to be awarded to a woman in 26 years* – exemplifies the complexity of design that women 'naturally' ought to excel at according to a very unusual thinker, namely Leonard Shlain. He articulates this potential in terms of the 'natural' cortico-neural constitution of women, and their concomitant predisposition towards specific tasks (Shlain 1998). *What I have in mind is captured well in the commentary on her work on the Design Museum and British Council's website (<http://www.designmuseum.org/designinbritain/zaha-hadid>), where she is said to have '...defined a radically new approach to architecture by creating buildings, such as the Rosenthal Center for Contemporary Art in Cincinnati, with multiple perspective points and fragmented geometry to evoke the chaos of modern life'.* I shall come back to her work after a fairly lengthy theoretical interlude.

But why accentuate women's 'natural' creative potential, as opposed to men's, for the modulation or structuring of space? Do they have something that men lack in this respect? Yes and no. *No*, in so far as all 'functionally normal' humans of both sexes are 'naturally' able, contrary to stereotyping prejudices, to perform analytical, logical, conceptually abstract tasks, on the one hand, as well as holistic, synthetic, concrete, iconically oriented tasks, on the other, because of being 'naturally' endowed with similar cerebral-neural capacities. (I put 'naturally' in quotation marks because, as will become clearer in what follows, what people regard as 'nature' and 'natural' is always already the outcome of certain axiological preferences, themselves embedded in social and cultural practices.) *Yes*, because of three important considerations:

a. First there is the neurological fact that the distinctive tasks that women have had to perform over millions of years dating back to hominid hunter-gatherer communities, have 'equipped' them with correlatively distinctive capacities or predispositions that are of great benefit to them in certain areas of human cultural practice, including art and architecture. For example, in women the *corpus callosum* – a connecting 'bridge' of neuronal fibres between the right and the left lobes of the human brain – contains more connecting neurons than in men, so that there is a greater integration between them.¹ (Again – this does not mean that men cannot do the kind of 'integration' that comes more readily for women.) Keeping in mind what neurologists call 'lateralization' (specialization of each of the brain's hemispheres) in humans, this means that right-brain functions which are basic to all kinds of design, including architecture – such as holistic, particularistic, iconic (image-based) thinking, synthesis and affectivity (including empathy as the affective capacity to identify oneself in terms of feeling with someone or something else) – are more readily integrated with left-brain functions such as abstraction, analysis, universalization, conceptualization and numeracy by women than by men. In passing, one should note that Marilyn French's remark (in the 1980s already) about the increasing trend in the business world to turn to 'right-lobe thinking' for cooperative and effective managerial solutions, in this way promoting a (characteristically feminine) facility for coordinating business tasks, is consonant with this insight on the part of Shlain (see French 1986: 546; as well as Shlain 1998: 18-23). Needless to say, this has important implications for women's 'natural' aptitude to perform both the largely iconic, image-oriented design tasks as well as the more analytical tasks ('breaking down' the iconic syntheses of design into smaller units) required by architectural practice. Or, more species-specifically, architectural design, although it requires analytical tasks such as 'breaking up' a totality into its constituent parts, relies in the first place on iconic, holistic imagining, which is a right-hemispheric, metaphorically 'feminine' activity (explained below), even in men who excel at such imaginative design.

From Shlain's discussion of the kind of tasks performed by women and by men, respectively, in early hunter-gatherer communities, it is clear why a somewhat different neural 'sedimentation' took place on the part of women than of men. Women were the gatherers; men the hunters. As hunters men had to be able to set emotions such as fear aside when faced with a dangerous animal – they had to be able to focus on the task of killing, in an 'objective', dispassionate manner. This led to masculine values being associated with 'being objective' – a right-brain function – and all that goes with it. On the other hand, women as gatherers had to be able to pick berries and dig out roots while carefully (and caringly) maintaining peripheral-vision surveillance of children – right- and left-brain functions combined – lest they wander too far from the mother's protective presence. It is not surprising, then, to find that women have more 'rods' (responsible for peripheral vision or field perception) in the retinas of their eyes than men, who have more 'cones' (enabling one to focus well on specific objects). It therefore makes sense that women generally handle multiple tasks at the same time more readily than men do (see Shlain 1998: 23-26).

b. Then one can adduce the historical fact that, after thousands of years of patriarchy – and because of certain ‘woman-friendly’, image-promoting changes in culture over the past two centuries, such as the invention of photography and the discovery and harnessing of electromagnetism for purposes of communication and image-dissemination (Shlain 1998: 382-392; 407-429) – this yoke has only relatively recently begun to lift, releasing creative powers on the part of women (and men who excel at ‘feminine’, image-based invention) which were previously kept in check by a host of legal, social and political mechanisms of patriarchal provenance.

c. Related to the previous two points, consider the fact that the customary associations of particular capacities (including empathy, affection and holistic thinking) with feminine values and others (including abstraction, logicity, numeracy and ‘objectivity’) with masculine values have gradually been subverted by recent cultural changes such as those mentioned above (which can be linked to the gradual improvement in women’s social, economic and political status; Shlain 1998: 386-392), with the result that women are largely free to pursue careers and professions previously regarded as being ‘closed’ to them, including architecture. By the same token, the stigma that was for so long attached to the image (see in this regard Kearney 1988), as opposed to writing (in the literal sense of the word), has also liberated the ‘feminine’ capacity on the part of men, to invent, disseminate and elaborate on images in multiple forms.

What I have indirectly been talking about (which may have seemed like the proverbial Greek to most readers) is the upshot of a groundbreaking interdisciplinary study which appeared a few years ago. In his book, *The alphabet versus the goddess – The conflict between word and image*,² Leonard Shlain, neurologist and neurosurgeon turned philosopher, deftly disabuses readers of the naïve belief that images and words are innocuous, equivalent means of representing the world, and things in the world. Instead, he provides plenty of evidence that images and written words represent irreducibly different – in a certain sense ‘opposite’ – perceptual modes, which are linked to women and men, respectively, in surprising ways (Shlain 1998: 5):

To perceive things such as trees and buildings through images delivered to the eye, the brain uses wholeness, simultaneity, and synthesis. To ferret out the meaning of alphabet writing, the brain relies instead on sequence, analysis, and abstraction. Custom and language associate the former characteristics with the feminine, the latter, with the masculine.

Shlain acknowledges that this claim may seem counter-intuitive to many who would claim the opposite on the basis of studies that have attributed better linguistic skills to women than to men, and superior skill at handling three-dimensional objects to men than to women. He reminds his readers that what he is claiming, supported by massive cultural, historical and mythological evidence, is that there is a firm connection between the ‘feminine principle’ and the image, on the one hand, and between writing and the ‘masculine principle’, on the other (Shlain 1998: 5). It is impossible to provide an adequate synopsis here of everything he proceeds to uncover with astonishing consistency in every historical epoch since the appearance of the first alphabet more than 3000 years ago, namely that the emergence of *literacy* (especially alphabet literacy) has gone hand in hand with the rise of patriarchy and misogyny, and the relatively recent resurrection and (especially) electronic dissemination of *images* have been conspicuously accompanied by an improvement in women’s fortunes. A thumbnail sketch will have to suffice, before returning to the issue raised above concerning women and architecture.

In a nutshell, Shlain was struck by the correlation, in the ancient world, between the transition from goddess-worship to masculine god-worship in various cultures, the simultaneous spread of (especially alphabet-) literacy, and the rise of patriarchy and misogyny in the place of the preceding social egalitarianism (Shlain 1998: VII-IX). This led him to hypothesize that there is a historical link between literacy and patriarchy, which he proceeded to test throughout

history and in various cultures, every time with resounding confirmation. In ancient Greece, for example, there was a marked difference between illiterate Sparta, where women had a high social and political status, and (ironically) literate, supposedly ‘democratic’ Athens, where women had no political rights and a much lower social status (Shlain 1998: 149-158). Among the extremely writing- and (abstract) law-oriented ancient Hebrews women similarly enjoyed hardly any social and political rights, while, among the iconically or Hieroglyph-oriented Egyptians, women had many social, economic and political rights, such as the right to own and administer property (Shlain 1998: 53- 63; 72-86).

One of the telling test cases adduced by Shlain pertains to the so-called dark middle ages when, after the fall of Rome, illiteracy rapidly became the norm. Surprisingly – or perhaps unsurprisingly, given Shlain’s hypothesis – the status of women rose conspicuously during this era, culminating in a veritable cult of women-worship associated with the medieval knights’ code of chivalry towards women (Shlain 1998: 261-277). When the late middle ages witnessed the return of literacy, and eventually Gutenberg invented the printing press in the 15th century, the oppression of women returned with a vengeance, culminating in the horrendous persecution of women as ‘witches’ in the course of the 16th-century Protestant reformation (Shlain 1998: 311; 323-377). Everywhere, the connection is clearly established: literacy promotes the interests of men and undermines those of women, while an appreciation of images promotes the interests of women and of an egalitarian society.

His explanation of this strange phenomenon has already been referred to, namely that there is a cortico-cerebral hemispheric connection between images and the values of femininity or women, on the one hand, and between conceptual abstraction (as required for written language), and the interests of masculinity, on the other. One of his ‘test cases’, apart from those already mentioned, is the fact that there was religious tolerance between Indian Muslims and Hindus during the approximately thousand years when literacy declined substantially, following the Muslim conquest of India in the 8th century, and that internecine religious strife between these two religions only erupted in the wake of the British colonial re-introduction of large-scale literacy to India in the 19th century. Moreover, during this time of relative *illiteracy*, the Muslim architectural achievements included the Taj Mahal – a major piece of architecture dedicated to a woman (Shlain 1998: 423). It is illuminating to compare the relentless patriarchal oppression of women in recently literate, so-called fundamentalist Muslim countries such as Afghanistan under the Taliban (Shlain 1998: 424; before the relatively recent American occupation and the subsequent reinstatement of women’s right to study and practice certain professions).

Since the invention of photography and the discovery of electromagnetism in the course of the 19th century, there have been a succession of improvements in the social and political status of women – events between which Shlain persuasively establishes correlations; the point being that photography introduced the circulation of images on a scale never experienced before, and that electromagnetism laid the basis for other inventions such as the telephone, the phonograph, the radio, cinema or film, television, tape recorders, video recorders and the personal computer, all of which promoted right-hemispheric activity and the feminine values associated with it, and reduced the hegemony of the masculine values associated with left-brain abstraction as embodied in the printed word (Shlain 1998: 386-392). Shlain is optimistic about the prospect of a relationship of harmony and equality between women and men, given the current pervasiveness of images and icons of all kinds in the media (Shlain 1998: 407-432) – it is no less than a return of the ‘goddess’ as metaphor for feminine values (increasingly, according to him, also embraced by men) to temper the patriarchal masculine values that have been dominant in society for thousands of years.

The implications of Shlain's astonishing, thoroughly researched writing(s) for the ability of women to exercise their creativity freely and unfettered in contemporary society, cannot be overestimated. Needless to say, the field where these powers may be exercised includes architecture, especially in light of the large role played in architectural design by the *ability*, but also the previously often absent *liberty* to think iconically or in images. As emphasized earlier, men and women share this ability (as well as those requiring abstraction), but women bear a special, distinctive relation to right-brain functions such as imaging – an association that stretches back beyond history into the mists of pre-history. The long reign of the dominance of the written, printed word, and the suppression of images (see Kearney 1988), hand in hand with the oppression of women, seems to be over at last. And this means that the creative contribution of women in and to architecture in the postmodern world has only relatively recently truly begun.

It is imperative, however, to avoid the misunderstanding – easily arrived at – that Shlain is advancing a kind of neuro-determinism, according to which men and women are 'determined' or coerced by their respective neuro-cortico profiles, developed over millions of years of hominid evolution, to know and perform in the world in fundamentally different ways. He has outlined the basis for attributing to the sexes divergent *predispositions*, reinforced by millennia of divergent task-performance (as indicated earlier), *not* a fundamental inability on the part of either sex to perform tasks that the opposite sex cannot carry out. To this should be added that the social values attributed to, or associated with the tasks in question, are crucial, in his interpretation, for the connection between alphabet literacy and patriarchy, which I am not primarily focusing on here (see in this regard Olivier 2005). Suffice it to say that values of abstraction and objectification, which are reinforced by left-hemispheric cerebral activity, promote patriarchy because of their association with masculine virtues, and that values such as affectivity and care, which are reinforced by right-hemispheric cerebral activity, promote a woman-centred, egalitarian society by a similar process of association. It follows, of course, that men, too – and not only women – are able to approach the world along the trajectory of 'feminine' values that are linked to right-brain activity, or to an equilibrium between left and right hemisphere functions (which is what Shlain ultimately argues for). Throughout his book, Shlain adduces plenty of substantiating evidence for these claims, and anyone who wishes to challenge him on this, would have to engage carefully and painstakingly with him, instead of summarily dismissing his claims.

As a brief elaboration on the meaning of 'feminine' here, I should perhaps stress that the adjective should not be taken literally. In fact, one could argue that poststructuralist thinkers such as Derrida, Deleuze, Kristeva, Foucault and Lacan have a 'feminine' approach in common with one another, in so far as, in a world still exhibiting patriarchal social structures and practices, they are foremost in demonstrating that the *first* move to make in such a world is to question, in a 'feminine' manner, the binary thinking sustaining it, and then, in a *second* move, to demonstrate that there is no 'foundationalist' justifiability for *any* hierarchical, binary thinking (not even for a matriarchal one). Instead, the second move – which may also be labelled 'feminine', because it eschews what is so typical about patriarchal hegemony – attempts to show that one has to negotiate oppositional positions in a paradoxical manner, allowing each to limit the other's claims or tendency to dominance. Needless to say, this implies that any and every kind of hierarchical thinking or practice – from religious to overtly ideological, political ones, as well as artistic or architectural practices that display such privileging hierarchical features – is subject to the dislocating, displacing strategies employed by the poststructuralists (see Foucault 1972; Olivier 1993a, for example). For this is what they have in common, and perform in various ways: the uncovering of complexity and axiological *undecidability* in the ostensibly most commonsensical of assumptions – in Derrida's work, by subtly displacing the exclusivist,

repressive valorization of certain values with an inclusivist, both/and logic; in Foucault's, by the relentless historicization of unquestioned, apparently 'universally' accepted practices, for example, in the process demonstrating that they are shot through with contingency (without reducing them to the latter). Undecidability, it should be remembered, does *not* mean that decisions should not be taken, but rather that, despite absolutely certain, complete knowledge always eluding finite humans, they *must* nevertheless be made, but minus any metaphysical or ideological certainty (see Caputo 1997: 137-138). Correlatively, therefore, 'undecidability' in art and architecture would preclude determinism of any kind, because it emphasizes precisely its opposite.

In this respect it is commensurate with Shlain's argument which claims that, despite certain distinct, 'natural' cortico-neural dispositions on the part of men and women, respectively, issuing from millions of years of performing different tasks in early hunter-gatherer communities, the general tendency, to promote 'masculine' social values through left-brain activities such as writing and other tasks requiring abstraction, is the manifestation of millennia-long associations of such activities with masculinity, and not of neural determinism. It is therefore not at all surprising to find that the poststructuralists referred to above display a characteristically 'feminine' approach (of the two kinds discussed earlier) in their work, which, in contrast to a 'left-brain', masculine approach, promotes a holistic, quasi-integrative (that is not fully synthetic), tensional and paradoxical way of thinking, where binary oppositions no longer hold sway in hierarchical fashion, but keep one another in check without easy resolution. It is therefore irrelevant whether it is a woman or a man who adopts such a way of thinking or artistic practice. Both are free to do so, although – given Shlain's painstaking investigation of the historically developed, cortico-neural basis of distinctive dispositions, one might anticipate that, when a woman chooses a quasi-integrative, holistic and paradoxical approach in her chosen field, she would be 'naturally' (note the scare quotes!) well-endowed to carry it off. And if Shlain is right in his analysis and interpretation of neurological conditions and historical developments, women have only relatively recently encountered the social and political circumstances – as mediated, according to Shlain, by the increasing circulation of feminine values-promoting images – that have freed them to actualize their 'natural' cortico-neural endowment.

As far as the perennial question of the 'author' is concerned, the poststructuralist approach does not – as so many commentators seem to think – imply that the author is 'dead' in the sense of denying *any* authorial role in the construction of something. Instead, it problematizes the role of the author (e.g. Foucault 1972), in so far as it argues that the author and the historically existing individual, who happens to be an 'author' among other things, represent different subject-positions, further distinguishable from that of the 'narrator' in a text by a certain author, for instance. This is the case with so-called deconstructive artists and architects, too. And regarding political, cratological implications, it also means that even the seemingly least politically significant philosophical, textual, artistic or architectural gesture or position has political implications. An architectural work such as Günter Behnisch's Hysolar Institute in Stuttgart (Papadakis 1989: 83-87) may strike the viewer or 'user' as being merely playful in its dislocation of traditional symmetries and horizontality by placing windows askew, for example, but this would be to misunderstand the pervasive, radical destabilization of fixed values, not only in architectural terms, but in a wider social and political context as well. In other words, it entails the radical questioning of the *status quo* across the board. This is also the case in the work of an exemplary woman architect, namely Zaha Hadid.

Ironically, given the evidence that Shlain adduces to show how the alphabet-literacy orientation in Muslim countries – which reinforces their dependence on women-hostile abstract law – manifests itself in severe discrimination, if not downright oppression, of women,

Zaha Hadid was born in 1950 in Baghdad, Iraq. However (<http://www.designmuseum.org/designinbritain/zaha-hadid>),

...she grew up in a very different Iraq from the one we know today. The Iraq of her childhood was a liberal, secular, western-focused country with a fast-growing economy that flourished until the Ba'ath party took power in 1963, and where her bourgeois intellectual family played a leading role. Hadid's father was a politician, economist and industrialist, a co-founder of the Iraqi National Democratic and a leader of the Iraqi Progressive Democratic Parties. Hadid saw no reason why she should not be equally ambitious. Female role models were plentiful in liberal Iraq, but in architecture, female role models anywhere, let alone in the Middle East, were thin on the ground in the 1950s and 1960s.

Perhaps this is why, judging by her work, Hadid appears to have had ample opportunity to develop the facility that Shlain (23-26) discerns on women's part – to deal with multiple tasks simultaneously – more readily than men do. Although one should keep firmly in mind that Shlain does not claim any unique 'natural' ability on the part of women (or of men, for that matter) – despite the cortico-neural predisposition to certain abilities that he describes on the part of either sex, *both* are capable of performing the same cognitive tasks – it is nevertheless striking to what extent Zaha Hadid's architectural designs (whether in the form of drawings, paintings, or actual buildings; see for example Norris & Benjamin 1988: 2, 7, 32) exemplify precisely the kind of holistic quasi-integration of analytic and iconic capacities which Shlain (as well as French; 1986: 546) attributes to women on ('natural') neurological grounds. In fact, when one examines her 'Painting of Cardiff Bay Opera House' (1994) or her Rosenthal Center for Contemporary Art, Cincinnati, (2003), it is not difficult to understand the statement, that (<http://www.designmuseum.org/designinbritain/zaha-hadid>):

Hadid's architecture denies its own solidity. Short of creating actual forms that morph and change shape – still the stuff of science fiction – Hadid creates the solid apparatus to make us perceive space as if it morphs and changes as we pass through.

It is not difficult to note the paradoxical nature of this description. Small wonder that she is regarded as one of the select few architects (the ranks of whom include Daniel Libeskind, Bernard Tschumi, Peter Eisenman, Hiromi Fuji, Stanley Tigerman and Günter Behnisch, all of whom exhibit a similar 'feminine' predisposition in their design work; see Papadakis 1989) whose designs are 'deconstructive' in the precise sense of displacing or destabilizing spatial harmonies and hierarchies in such a way that no solid, reassuring foundation is unambiguously left intact, but is not entirely absent either (Derrida 1989; Norris 1988; Olivier 1993 & 1993a). Instead, her treatment of space is complex to a fault – she allows observers (inhabitants) of her buildings to experience them less as a unified space, than as a multiplication of spaces or spatial perspectives, irreducible to a single viewpoint. In terms of Shlain's interpretation, above, of the 'natural' differences between men and women as far as left- and right-hemispheric values (analysis, abstraction, conceptuality, and holism or integration, respectively) are concerned, it seems to me clear that her designs embody both, but not as a simple synthesis. Instead, one can discern the analytical or even conceptual aspects of her designs in their scrupulously articulated, sometimes dizzying, multi-layered structures, and their holistic character in the surprising or strange fact that one is nevertheless able to experience them as distinctive buildings (or images of buildings, in those cases where they were not actualized or built). Importantly, these two aspects remain in a kind of life-generating tension, without collapsing into each other. At different times one finds oneself having to negotiate the architectural embodiment of the analytical and the holistic, becoming increasingly aware of their complexity.

This is deconstructive architecture at its best – it refuses simple harmonies or symmetries without relinquishing structure altogether; it complexifies structure without degenerating into chaotic formlessness. One might say that, consonant with Shlain's description of the complex

cortico-neural architectonic of human beings – where the divergent ‘natural’ functions of laterally specialized brain hemispheres supplement each other in complex ways – Hadid’s architectural designs comprise the complex, non-reductive ‘intertwinement’ of divergent spatial qualities in distinct, identifiable buildings. Moreover, as Leoni Schmidt has helpfully pointed out to me in a referee’s report, ‘...horizontalness in her designs does go further than that of most of her [deconstructive] colleagues in trying to establish a connection with the environment’. However, while this connection may be formally suggested by specific designs – as her design (and painting) for the Cardiff Bay Opera House, which is easily available for inspection on the internet, shows – its ‘feminine’ aspect is apparent in the sustained ambivalence or paradoxical spatial quality of being ‘connected’ to its enviroing space, and yet simultaneously retaining its distinctness as a work of architecture. This is precisely what Shlain’s interpretation of a ‘feminine’ way of thinking – compatible with the poststructuralists’ penchant for paradox and ambivalence – amounts to in design: not a reduction of one (here, the building-design) to the demands of its environment, nor *vice versa*, but a kind of reciprocally informing dialogue between them, with each retaining its own distinctiveness.

Although one may justifiably describe her work as being deconstructive, though, given its complexity, it is not surprising that alternative, compatible characterizations are also possible, such as the following:

You could call her work baroque modernism. Baroque classicists like Borromini shattered Renaissance ideas of a single viewpoint perspective in favour of dizzying spaces designed to lift the eyes and the heart to God. Likewise, Hadid shatters both the classically formal, rule bound modernism of Mies van der Rohe and Le Corbusier and the old rules of space — walls, ceilings, front and back, right angles. She then reassembles them as what she calls ‘a new fluid, kind of spatiality’ of multiple perspective points and fragmented geometry, designed to embody the chaotic fluidity of modern life (<http://www.designmuseum.org/designinbritain/zaha-hadid>).

I referred earlier to the potential creative contribution of women to architectural design in the postmodern world. From the above one may conclude that, in the case of Zaha Hadid (and on the part of other women architects, as well as male architects who are predisposed to this ‘feminine’ approach to design) this contribution has already been actualized to a large degree in a distinctive manner, exemplifying the ‘natural’ capacity that Leonard Shlain has so evocatively described on the part of women.

Notes

1. See Shlain 1998: 23. From Shlain’s discussion of the kind of tasks performed by women and by men, respectively, in early hunter-gatherer communities, it is clear why a somewhat different neural ‘sedimentation’ took place on the part of women than of men. Women were the gatherers; men the hunters. As hunters men had to be able to set emotions such as fear aside when faced with a dangerous animal – they had to be able to focus on the task of killing, in an ‘objective’, dispassionate manner. This led to masculine values being associated with ‘being objective’ – a right-brain function – and all that goes with it. On the other hand, women as gatherers had to be able to pick berries and dig out roots while carefully (and caringly) maintaining peripheral-vision surveillance of children – right-and left-brain functions combined – lest they wander too far from the mother’s protective presence. It is not surprising, then, to find that women have more ‘rods’ (responsible for peripheral vision or field perception) in the retinas of their eyes than men, who have more ‘cones’ (enabling one to focus well on specific objects). It therefore makes sense that women generally handle multiple tasks at the same time more readily than men do. See Shlain L., *The alphabet versus the goddess*, pp. 23-26.
2. Published by Penguin Arkana, New York, 1998. Leonard Shlain is also the author of an equally revolutionary earlier book, *Art and physics*

– *Parallel visions in space, time and light*, reprinted by Perennial, New York, 2001 (first published in 1991). There he had argued, with many illuminating instances to demonstrate his claims, that art, as a distinctive (right-brain) mode of perceiving the world, has usually preceded physics, as a different (left-brain) perceptual mode, in announcing and articulating, iconically, a fundamental change from one epochal artistic representation to a new one. Invariably physicists have followed such artistic shifts only later, articulating analytically and in

abstract, conceptual terms what artists presented in the form of image-configurations before them. The earlier book already touched upon many of the themes that Shlain later turned in the direction of the connection between literacy and patriarchy, images and femininity, in *The alphabet versus the goddess* (1998). Before Shlain, other writers, such as Colin Wilson, had drawn attention to the as-yet unexplored potential of right-hemispheric thinking. See Wilson 1980.

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