PROSPECT-REFUGE THEORY AND ALVAR AALTO'S 'EXPERIMENTAL HOUSE' AT MUURATSAKO: 'WHAT IS IT THAT WE LIKE ABOUT AALTO'S SITE-RELATED ARCHITECTURE, AND WHY?'

JOHN ROBERTS
School of Architecture and Built Environment
The University of Newcastle
The architecture of Alvar Aalto exemplifies developed relationships with nature, the site and the greater landscape. Aalto's interest in these matters is repeatedly mentioned in critical commentary on his built work, notably the Muuratsalo 'Experimental House' of 1953.

Geographer Jay Appleton originally put forward his 'prospect-refuge theory' to help explain, in his words, 'what it is that we like about landscape and why'. The theory makes an extended argument for biologically, rather than culturally derived human landscape preferences. Prospect-refuge theory has been used by Grant Hildebrand to discuss Wright's houses, and has been mentioned by other commentators in an architectural context.

Appleton's prospect-refuge theory of human landscape preference is discussed, using the theory's terminology to identify and comment on architectural elements which offer an observer satisfaction and pleasure in that they symbolize landscape elements which once had survival benefit for archaic Homo sapiens.

Numerous prospect-refuge elements are discernible in Aalto's Muuratsalo house; they are described and discussed as part of 'what it is that we like about Aalto's site-related architecture', and to help explain why Aalto and the Muuratsalo house continue to be held in high critical and popular regard.

The architecture of Finnish architect Alvar Aalto (1898-1976), his writings and lectures, and critical commentary on his work all refer repeatedly to his and humankind's relationship with nature. Discussing the word 'nature' in Keywords, Raymond Williams points out the complexity of the word 'nature', whereby any 'full history of the uses of the word nature would be a history of a large part of the history of human thought.' British architecture critic Adrian Forty, in his Words and Buildings, traces 'nature' through architectural history, and asserts that

'The distinction between the world created by man – 'culture' – and the world in which man exists – 'nature' – has been perhaps the single most important mental category ever conceived, and there can be few disciplines in whose formation it has not been fundamental. Architecture is no exception. Yet it would seem obvious that within this classification, architecture – a human product – belongs to culture, not to nature, from which it is categorically different.2

British geographer Jay Appleton argues in his 1975 book The Experience of Landscape that human aesthetic reaction to landscape has its beginnings in the biological – the natural, rather than the cultural – past of Homo sapiens.2 His biologically-oriented argument differs from the greater body of architectural criticism, which tends to be argued from a cultural perspective similar to that defined by Forty. Appleton's 'prospect-refuge theory' provides an argument and a lexicon of terms with which it is possible to articulate an understanding of 'what it is that we like about landscape and why we like it' (this phrase), and why people find similar pleasure and satisfaction in the perception of architecture. In Appleton's view, 'what it is that we like about landscape is the potential to achieve a balance of prospect and refuge in a landscape where the components of a landscape 'are conducive to the observer seeing or hiding'.4

Leading American researchers in evolutionary psychology, psychologist Judith Heerwagen and zoologist Gordon Orians, maintain that a 'crucial step in the lives of most organisms, including humans, is selection of habitat. If a creature gets into the right place, everything else is likely to be easier.4 Harvard biologist Edward O. Wilson coined the term 'biophilia' in his 1984 book of that name to describe 'the innately emotional affiliation of human beings to other living organisms.' Heerwagen and Orians add a defining note: 'The sense of aesthetic pleasure and emotional enticement associated with nature is, in Wilson's view, the "central issue of biophilia." When that same pleasure and enticement is felt in the presence of a work of architecture, it is arguable that the reaction is of a similarly psycho-biological nature.

American landscape architecture professor Ann Whiston Sparr wrote of Frank Lloyd Wright that it was often 'impossible to say where building ends and landscape begins, his work part of a larger tradition of architecture that embraces the idea of landscape and building as continuous, where building interiors resemble landscapes.' Her footnote adds Aalto's name to a short list of similarly-inclined architects.4 However, prospect-refuge theory is not used to identify architecture which naively mimics landscapes, but rather to discuss elements which symbolize prospect and refuge in architectural and landscape settings, elements symbolic of landscapes which have been favourable to human survival over hundreds of thousands of years.

Landscapes architecture critic Marc Treib, in his essay 'Aalto's Nature', similarly writes that in Aalto's work, 'there is no direct replication of natural forms and little mimicry; instead, architecture transforms program and site into direct and/or metaphorical continuities between landscape and construction.' Treib discusses not natural but cultural meanings in Aalto's work, yet he contrarily quotes Aalto as saying that '[a]rchitecture still has unused resources and means, which derive straight from nature and from the reactions springing from the human soul indescribable in words.'5 Prospect-refuge theory concerns exactly this instinctual,
non-cultural human reaction – sensed without words – to elements symbolic of favourable landscape seen in landscape architecture, painting, literature and architecture. Prospect-refuge theory discerns only elements in such works which seem to aid the processes of finding ‘an unimpeded opportunity to see’, and/or ‘an opportunity to hide’. The focus of prospect-refuge theory is summed up in a phrase which Appleton borrows from ethologist Konrad Lorenz, ‘...to see without being seen’. It allows identification and discussion of those features, objects or situations which are conducive to seeing and those which are conducive to not being seen, and of elements which actually or symbolically suggest to an observer opportunities to extend a field of vision – prospect – or to hide or shelter – refuge. Appleton’s argument is that the theory connects environmental phenomena with innate human biological sensitivities: It is a fundamental tenet of prospect-refuge theory that the sensitivity which we experience towards the landscape in terms of seeing without being seen derives from behaviour mechanisms which are innate – comparable to those mechanisms which induce us to eat, to mate or to protect our young.

Prospect-refuge theory has its opponents, such as British geographer Denis Cosgrove, and historian Simon Schama, who hold, in separate ways, that the notion of ‘landscape’ is politically, mythically, culturally, even economically constructed, rather than being essentially a biological construct.

Amongst supporters of Appleton’s prospect-refuge theory in an architectural context, Australian geographer Brian Hudson has argued that the verandah form and its associated leisure activities have human survival value: ‘People in various parts of the world and in many different ages have created verandahs and other structures providing shelter, privacy, and a clear field of vision [...]. Here they can relax in relative comfort, protected from the elements and, if desired, hidden from view.’

American architectural academic Grant Hildebrand, in his 1991 book The Wright Space, discerns compositional elements symbolizing prospect and refuge which recur in nearly all Wright’s houses from 1902 to the early 1950’s, and which, he argues, may account for Wright’s enduring popular appeal. These combine in the ‘Wright Pattern’, of which the following are typical elements: balconies or terraces, deep overhanging eaves, circuitous entry path; elevated major spaces, central fireplace, low ceiling edges, interior views to spaces beyond. Hildebrand maintains that prospect-refuge ‘holds the possibility of describing and exploring issues of spatial choice at a more significant level than has been offered by any other design-related theory.’

Australia-based landscape painter John Woleseley reflects on his instinctual pleasure in sighting and experiencing landscape, citing Appleton’s theory to explain his intuitions: There are many theories about the instincts which come into play when we move within the landscape. Why does one feel good in certain parts and not in others? Have we inherited any behaviour patterns from the period during which our ancestors were hunters, foragers and gatherers?

One theory I like very much is J. Appleton’s ‘Prospect, Refuge and Hazard’ theory. It’s about how we look at landscape painting, but has a lot of relevance with regard to how we actually see the land itself, or how we choose a camping place [...]. I have found, as I expect many have, that in all my explorings I have so often come to a particular place that feels so good for no accountable reason. Or has a particular flavour or beauty about which I feel particularly animal. A quality specific to that patch of ground [...]. There are hollows and eminences and cave mouths which invite some peculiar mix of sybaritic pleasure.

Woleseley acknowledges this ‘particularly animal’ feeling as a spontaneous reaction, a sensuous viewing of landscape with subconscious desire for strategic advantage. Appleton suggests that the way our species selects habitats and takes pleasure in landscapes is fundamental biological survival behaviour which has been of benefit to Homo sapiens for thousands of generations. He asserts in his book The Symbolism of Habitat that ‘[t]hose creatures enjoy better prospects of survival which are more powerfully motivated by attraction to seek out and remain within territory which offers the means of satisfying their own particular life-styles’, emphasizing the biological importance of the attraction of propitious terrain.

Finnish critic Juhani Pallasmaa has recently commented on Hildebrand’s use of prospect-refuge theory, which he connects to Aalto’s understanding of human instincts, arguing that Aalto’s architecture is based on similar essential psycho-biological motifs as Wright’s work. In his writings, Aalto frequently emphasises the importance of both biological analogies and the psychological dimension as the basis for his design. The emotional impact of Aalto’s architecture frequently derives from sensuous archaic and unconscious images of shelter, protection, comfort, togetherness and familiarity.

Aalto’s Experimental House, built in 1953 for himself and his second wife Elissa on the Finnish island of Muruaisalo, and considered by British critic Richard Weston as Aalto’s ‘most personal and private meditation on the theme of nature and culture’, can be introduced in the words of Finnish architect Mari Kuononen:

The basic plan shape of the building is a square and the most important space is a 9 metre by 9 metre patio with an open fireplace in the middle. The patio is demarcated by brick walls and the interior spaces of the house itself, with its rooms arranged in an L-shape as if providing an accompaniment to the main architectural theme of the fireplace area.

The most important of the interior spaces is a combined living room and studio, with a gallery suspended from the roof structure at the higher end, to form a space for painting.

The building deploys an Aalto archetype of shelter: critic William J. R. Curtis points out that ‘One such archetype was the courtyard, or to be more precise, the “harbour”, formed by an inward-looking perimeter building’. House and walls are painted white on their outside surfaces, while the four inner faces and the floor of the courtyard are patterned with bricks and ceramic samples. The courtyard or patio has a central focus in the form of an open fireplace, a pit about one metre square let into the brick floor of the courtyard. The importance of the courtyard and fire is attested to by Aalto:

The whole complex of buildings is dominated by the fire that burns at the centre of the patio and that, from the point of view of practicality and comfort, serves the same purpose as the campfire in a winter camp, where the glow from the fire and its reflections from the surrounding snowbanks create a pleasant, almost mystical feeling of warmth.

The image of warmly glowing snow walls indicates Aalto’s sense of an architecture which derives from direct human experience of nature; he aims to transpose not only the ‘practicality and comfort’ of the winter campfire, but more importantly the visual allure of the ‘almost mystical’ fire in the snow.
images of the Muuratsalo house, notably views and details of the
courtyard brickwork, are amongst the most widely published Aalto
images. In The Experience of Landscape Jay Appleton provides
what he calls a ‘framework of symbolism’; a set of over forty terms
for the interpretation of landscape and other images. This lexicon of
prospect-refuge terminology is used here to reveal and articulate
aspects of the biologically-derived ‘aesthetic satisfaction’ of Aalto’s
architecture.

Photographs from outside looking uphill show a tallish white
masonry wedge set on a sloping forest site, with small windows
in its north elevation. A rupture of the western wall is made by an
oversized opening with a low stepped sill and vertical slats; in the
south wall a wide gateway opens into a brick-lined courtyard. In
prospect-refuge terms, from this aspect the building appears to be
a prominent primary ‘refuge’, its walls offering opportunity to hide
from pursuing or quarry, while the rooms behind the windows seem
to promise ‘shelter’ from the inanimate elements. This apparent
protection is reinforced by the height and solidity of the walls, which
gave Aalto’s biographer Göran Schildt a sense of ‘something
reminiscent of a monastery on the forested cliffs of Mt Athos’.

Prospect-refuge theory can describe both actual and symbolic
elements which give an observer satisfaction: it holds that a
landscape which affords both a good opportunity to see and a
good opportunity to hide is aesthetically more satisfying than one
which affords neither. Appleton views a building as a landscape
element of refuge, the planned sanctuary contrived with care and
forethought for the express purpose of shielding vulnerable and
sensitive man from the hostile forces to which he would otherwise
be exposed. Thus a detail like the pantile coping, where the roof
itself is clad with bituminous membrane, symbolizes the shelter of
a roof and the ‘artificial refuge’ of a building: the perception of an
apparently tiled roof and the implied opportunity to hide is an
example of refuge symbolism.

When seen from outside, the gateway and ‘window’ openings in
the wall are refuge symbols of ‘accessibility’, with potential to
facilitate the observer’s entering and hiding, as Appleton says,
‘anything which suggests ease of penetration is conducive to the
symbolism of the refuge’. The wall appears as an accessible
refuge, particularly when seen from the falling ground of the forest
site below, from where at the same time it offers symbolism of
‘indirect prospect’, a chance of extending the viewer’s field of
vision. The wall’s wide gateway is a further symbol of ‘accessibility’,
one of what Appleton terms ‘apertures of all kinds which invite
penetration’. It is worth noting that Aalto’s white ‘castle’ in the
forest, when seen from the lake or the sauna below, becomes a
symbol of prospect rather than refuge, promising an ‘artificial
secondary vantage-point’ to complement the imagery of refuge.

Appleton writes of the medieval castle garden that its ‘whole
character was that of a refuge, a kind of extension of the house or
castle into the open air. The most potent refuge symbol associated
with the garden is the garden wall’. Dutch landscape architects
Rob Aben and Saskia de Wit begin their study of medieval
gardens, The Enclosed Garden, ‘On entering a space with thick
walls through a heavy door, you would logically expect to find
yourself indoors. All the more surprising, then, when that doors
turns out to be outdoors.’ This not only suggests the Muuratsalo
courtyard gateway, but an Aalto architectural ‘inversion’, of white
painted outer and rough brick inner walls. The inversion continues;
the building’s main room is outdoors, has a central fireplace, and
offers nowhere to hide; the diminutive sheltering house has refuge
symbols in the form of the potentially penetrable living room door
and windows, with vestigial door and window openings in the red
brickwork quilt of the bedroom wing.

The nature and intensity of prospect-refuge symbolism varies when
perceived from different places. Hildebrand is aware of this unique
spatial potential of architecture when he writes that ‘the degree
of refuge or of prospect is subject to infinite variety and can be
manipulated by the occupant at will simply by moving to the
condition he wishes to enjoy at any moment.’ Moreover, any
element symbol of refuge may ‘invent’ to symbolize prospect, or vice
versa, depending on the location of the observer.

Appleton mentions a different ‘inversion’ of symbolism, notable in
the common but dramatic instance of fire in a night landscape. In
prospect-refuge terms, ‘light is conducive to seeing, so deprivation
of light is conducive to not being seen’. But when inversion is
achieved, refuge symbols transform into contained, limited
prospects. Thus the firelit Muuratsalo courtyard of Aalto’s
description can transform from refuge to prospect – as in a painted
Nativity scene, where, as Appleton says, ‘the refuge of the stable
is illuminated as a tiny prospect contained within the all-enveloping
refuge of the night.’ This is the chiaroscuro effect of the campfire
which delighted Aalto with ‘the glow from the fire and its reflections
from the surrounding snowbanks’. In the strict terminology of
Appleton’s theory, the visual ‘glow’ and ‘reflections’ of the fire
comprise its prospect-refuge symbolism; the cosy feeling of fire
is not a visual prospect-refuge symbol, and does not contribute to
the security of ‘seeing without being seen’. ‘Fire’ is not part of
Appleton’s lexicon of prospect-refuge theory, and Hildebrand is
careful to point out that an ‘understanding that the typical western
fireplace is actually a place for a fire certainly must be learned’;
a fireplace is not an intuitively recognized refuge symbol.

The courtyard which contains the fireplace has four different walls
of patterned brick, with their various openings. Once the observer
reaches its level, it is a place of prospect, for looking into and
beyond the immediate landscape. The main view appears to be a
villa southward to the lake, a commanding view to be enjoyed
through the broad gateway opening, from near the central fire,
Finnish architecture professor Markku Lahti notes that through the
courtyard’s western opening, the tower of Aalto’s 1929 Muurame
Church can be seen. This view of the church tower is a ‘simple
vista’, distinguished from ‘panorama’, which is a ‘wide view from a
good vantage point’; a ‘vista’ is restricted by conspicuous
margins, and a ‘simple vista’ is ‘obscured by some intervening
screen which contains a limited breach through which the eye can
penetrate further’. The distant church tower itself is a symbol of
‘indirect prospect’. Appleton notes that ‘aspiring spires have a
particular potency as indirect prospect symbols; their whole design
and structure is aimed at expressing elevation above the
surrounding country’. A distant tower has the potential to give the
observer a further vantage-point, more information, and command
of a further field of vision. All this is seen through the ‘simple vista’
of the slatted stepped opening in the west wall, a view ‘obscured
by some intervening screen which contains a limited breach
through which the eye can penetrate further’. Now overgrown, it is
an element which achieves a fine balance of prospect and refuge.

Lahti also notes that a monitoring, if not commanding, view opens
from the Muuratsalo kitchen out to the north slope, to the route by
which guests would approach the house. The potential to observe
arriving visitors from the corner kitchen, to see without being seen,
offers real and perceived strategic advantage to the observer
within, and is a primary strategy of prospect-refuge, providing a
sense of security on a remote island. Appleton only has the term
‘peephole’ to describe a vista limited in both its vertical and
horizontal directions – a window view: the variety of windows in this
building and in the broader scope of Aalto’s work suggests that an
extended prospect-refuge glossary of fenestration might
be developed to extend the theory further into architecture.
A version of ‘interior prospect’ is provided by the house’s painting loft. Finnish architect Matti Sarak-senahto writes, ‘[f]rom the loft there is a long, diagonal view over the living room to the [interior] fireplace and the entrance door. The living room is reminiscent of a miniature stage.’ The prospect from the refuge of the loft into the main room is analogous to the prospect extending outwards from the refuge of the room, past the fireplace, through the greater ‘stage’ of the courtyard and the coulisse openings of the gateway, and towards the lake. A coulisse is a kind of theatrical prop, a cutout shrub or wall which projects onstage: Appleton enjoys the prospect-refuge potential of the couliuse, allowing it to twelve index references in The Experience of Landscape (theirs has two), and writing that the coulisse ‘plays a vital contrapuntal role in the prospect-refuge complement, because it always corresponds with an interface between the two kinds of symbol.’ The couliuses either contributes to a heightened sense of perspective and distance, hence prospect; or its lateral projection may appear to facilitate one’s hiding from view, symbolizing refuge. The freestanding gateway walls do not simply frame the south view: they promise both potential hiding-places and further vistas.

Finnish architect Christian Gullichsen, whose mother Mairi commissioned Aalto’s 1939 Villa Mairea, writes that, ‘[i]n its whole life, Aalto was a great actor [...] Almost all his buildings strike a pose, like an actor entering the stage. [...] Aalto often subordinated the whole to a brilliant introduction. One or two really good façades were enough; the rest would follow.’ A sense of theatre and visual contrivance pervades the Muuratsalo complex, where a 120 square-metre house is elided, by means of an 80 square-metre walled courtyard, across its sloping site and into the surrounding landscape: considerable architectural resources are invested in this actual and symbolic interweaving of the human and the natural.

The twin delights of shelter and seeing out are essential strategies of both the Experimental House and prospect-refuge theory. The amount of prospect-refuge symbolism and the aesthetic qualities of the building combine to produce high levels of visual and emotional intensity. Appleton’s theory provides terms to enable a description of ‘what it is that we like about Aalto’s site-related architecture and why’, of an observer’s pleasure in the building’s commanding situation, its carefully composed courtyard, walls and details, and an ultimately satisfying balance of prospect and refuge.

It appears that the habitat potential and the strategic advantages of the remote, rocky forest site are finely exploited throughout Aalto’s architecture. That this building can help recall and restate the human bond with nature is an important aspect of Aalto’s architectural legacy. From beyond, the building offers an apparent balance of prospect and refuge symbolism; from within, it offers further layers of landscape symbolism. Before Appleton, we simply do not know this; after Appleton, we have a language for comprehending and classifying such phenomena. Jay Appleton has provided a theory and a terminology of landscape aesthetics which derive from archic human instinct and from observation of nature; he offers a way to argue how architecture may belong in some significant part not only to the world of culture, but also, along with humankind, to the world of nature.

1 Raymond Williams, Keywords: A Vocabulary of Culture and Society, London: Flamingo, 1985, p. 221.
4 Appleton, Experience of Landscape, p. 235.
5 Appleton, Experience of Landscape, p. 86.
8 Hearne and Oxiana, Humans, Habitats, and Aesthetics, p. 142.
10 Spini, The Language of Landscape, n. 46, p. 278. The list includes Australian architects Richard Leplastrier and Glenn Murcutt.
13 Appleton, Experience of Landscape, p. 86.
14 Appleton, Experience of Landscape, p. 63; the quote is attributed to Konrad Z. Lorenz, King Solomon’s Ring, London: Methuen, 1963.
15 Appleton, Experience of Landscape, pp. 76–77.
21 Hildebrand, The Wright Space, p. 16.
22 John Wolseley, ‘Landscape – Inscape’; in Jerry de Gryse and Andrew Saint (eds), Our Common Ground: A Celebration of Art, Place and Environment, Hobart: The Australian Institute of Landscape Architects (Tasmania) and The Centre for Environmental Studies, University of Tasmania (CES Occasional Paper 25), 1994, pp. 84–86.
29 Appleton, Experience of Landscape, chapter 4, ‘A Framework of Symbolism’, pp. 73–107. This chapter provides the terminology, which is referred to and extensively quoted in this paper. See also Appendix C: ‘Glossary of Terms’, pp. 269–262, for terms to which ‘some particular shade of meaning is attached beyond that normally understood from general usage.’
32 Appleton, Experience of Landscape, p. 65.
33 Appleton, Experience of Landscape, p. 92.
34 Appleton, Experience of Landscape, p. 94.
35 Appleton, Experience of Landscape, p. 94.
36 Appleton, Experience of Landscape, p. 171.
37 Aben and de Wit, Enclosed Garden, p. 5.
39 Hildebrand, The Knight Space, p. 147.
40 Appleton, Experience of Landscape, p. 100.
41 Appleton, Experience of Landscape, p. 122.
42 Hildebrand, The Knight Space, pp. 35-36.
44 Appleton, Experience of Landscape, p. 77.
45 Appleton, Experience of Landscape, p. 77.
46 Appleton, Experience of Landscape, p. 81.
47 Appleton, Experience of Landscape, p. 77.
50 Appleton, Experience of Landscape, p. 203.