Firmitas re-visited: Permanence in Contemporary Architecture

by

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including my required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

This thesis proposes that the concept 'permanence' is relevant at the beginning of the twenty first century. It examines why the term, while perhaps pertinent in addressing the disposability of architecture in Western society, seems anachronistic. The study reviews the seeming inaccessibility of the term in its contested and plural interpretations, and reviews problems in its definition and relevance.

A close examination of definitions, interpretations and contemporary approaches is provided in order to create a conceptual framework that reveals complex implications of the term. Four strategies for understanding the concept are offered: 'realms versus modes', definitions, a distillation of four positions relating to permanence, and an inquiry into contemporary issues relating to the concept. 'Absolute' and 'relative' realms illuminate a scope for permanence, and 'static' and 'dynamic' modes are discussed. A series of definitions are reviewed that reveal nuance in implications. An analysis of four essays on permanence is included, one from the beginning of the twentieth century and three from the end. This section reveals a series of conflicts relating to the way contemporary Western society uses and understands the term.

Permanence within architecture is widely associated with the Vitruvian definition of *firmitas*: mass and solidity crafted to endure eternally. Vitruvius' employment of 'permanence' is used as a grounding definition and a fundamental reference for the term's evolution into contemporary usage. In observing the endurance of the original Vitruvian term today, a disconnect becomes evident: absolutism in a society defined by relativity. This thesis argues for the critical significance of the term at a pivotal point in history in addressing the problem of disposable architecture on both a cultural and ecological level. Final open-ended questions are raised that consider staggering construction and demolition waste statistics, implying that permanence could play a significant role in effective responses to a global environmental crisis.

Acknowledgements

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Finally, thank you to my family for all of their incredible support and love – I could not have done it without you.

For my grandfathers; the one I wish I'd known and the two I'll never forget.

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List of Illustrations

All photos are by the author unless otherwise indicated

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Demolition in Progress
August 2006

Former ‘Inn on the Park’,
Leslie St. & Eglinton Ave.,
Toronto

Preface

The following statistics testify to the staggering quantity of waste produced by the construction and demolition of buildings. They poignantly illustrate cycles of extracting and disposing of apparently abundant resources, and testify to the transitory nature of our culture:

"The construction sector accounts for around 25-40% of final energy consumption in OECD (Organization for Economic Cooperation & Development) countries[1]. Consequently, a great amount of construction and demolition waste (C&DW) is being generated in OECD countries. A breakdown of C&DW data shows that a significant proportion of this waste comes from demolished buildings."[2]

"Canada is one of the largest per capita producers of waste on Earth… estimates of C&DW in Canada and the U.S.A., as a proportion of the total waste stream, range from 10-33%, with a conservative estimate of about 20%."[3]

"It is important to note that a sharp increase in C&DW is predicted for this century. It is estimated that demolition waste generated in the European Union will increase from 160 Mt (Million tones) in 1995 to 330 Mt in 2010 and 500 Mt in 2060. Similarly, building-related demolition waste in Japan is estimated to increase from 12 Mt in 1995 to 42 Mt in 2010 and 56 Mt in 2025 (Research Group for Environment Friendly Building Technology, 1995)."[4]

"Among the direct environmental consequences of construction, the most significant is its consumption of energy and other resources. Construction is believed to consume around half of all the resources humans take from nature."[5]

"The quantity of C&DW from demolished buildings per year could be halved if the average service-life of buildings were doubled."[6]

Notes

[1] Canada is an OECD country.
[2] Environmentally Sustainable Buildings, Challenges and Policies, OECD (Organization for Economic Co-operation and Development), 2003, p.7
[3] Exploring the Connection Between Built and Natural Heritage, Research Report, Heritage Canada Foundation, 2001, p.8.
[4] Environmentally Sustainable Buildings, Challenges and Policies, OECD (Organization for Economic Co-operation and Development), 2003, p.27
[5] UNEP (United Nations Environmental Programme) Industry and Environment April – Septmember 2003, issue 5, p.6.
[6] Environmentally Sustainable Buildings, Challenges and Policies, OECD (Organization for Economic Co-operation and Development), 2003, p.27.

0.2
The Pons Aemilius was the first stone bridge built over the Tiber. The piers were built in 179 B.C. and the arches in 149 B.C. Since its final collapse in 1598 it has been referred to as 'Ponte Rotto'. (Rome Blue Guide)

Ponte Rotto

Rome

Introduction

Architecture's high turnover rate is a major factor in the world's present environmental crisis. If current practices continue, the amount of construction and demolition waste will rise dramatically this century from present levels, which are already too high. This thesis considers 'permanence' an antidote to disposability and suggests, by promulgating a broader understanding of the concept, that it can play a role in rectifying the environmental crisis. Yet despite its prospective significance in this struggle, conflict from a society that questions its relevance undermines its potential. Its potential is further undermined from a lack of clear understanding of the idea of permanence in architecture. By revealing and understanding the terms of conflict this thesis seeks to augment the concept's potential through clarity. Though the scope of this thesis is limited to permanence from a Western perspective and is directed towards the architectural community, its applicability and potential is by no means limited to such categories.

> In [their] *present form*, words like "durability" have lost their currency.
> - Luis Fernández-Galiano[1], my italics

> Age is so valued that in America it is far more often fake than real.
> -Stewart Brand[2]

In our society a loss of currency implies a loss of value. However, to state that durability has lost its currency seems contradictory when we have evidence that permanence is valued in society in such forms as preservation movements, heritage designations, and the mass appeal of adaptive re-use. However, to a great extent, permanence today, in terms of material durability, *has* lost its value. The meaning that I am attributing to material durability is expressed in Vitruvius' *firmitas*: the ability of a building to endure based on its own material strength and soundness of construction. In asserting that material durability has lost its value it is in association with the transient nature of our modern society; trends such as temporary employment contracts, frequent relocation, and volatile real estate markets, have the effect of positioning material durability as an irrelevant concern in current culture and design. The cyclical nature of capitalism, driven by the desire for ever-increasing profit, has relegated the potential endurance of materials through their inherent strength to a minor role. As Karl Marx said of capitalism: "All that is solid melts into air…"[3]

The aim of this thesis is not to analyze our culture of transience but rather its *effect* on the value and manifestation of permanence in contemporary architecture. In short, I examine the apparent disconnect that exists between the concept of permanence and its manifestation today. In order to address an understanding of permanence within our contemporary culture, an assessment must be made as to what the current definition of permanence is.

Vitruvius' *Ten Books on Architecture* remains the earliest surviving architectural treatise in Western society; as such its position on 'permanence' remains the founding perspective of the concept. This treatise, widely accepted as the most influential text on Western architecture, provides a datum point for the definition of permanence in architecture. Vitruvius often advocates material durability through

‘absolute’ statements such as, “a faultless wall may be built to last forever”, “a perfection that will endure to eternity”, “escape ruin as time goes on”.

Emerging from a century transformed by the replacement of absolutes with relativities, an absolute concept such as Vitruvius’ permanence is bound to meet with resistance. Upon closer examination, however, it is evident that permanence, especially in connection with architecture, is neither an entirely absolute concept nor does Vitruvius employ a completely absolutist stance in the matter. In other words, there is hope that through a finer examination of the concept, qualities of permanence more in tune with contemporary society may be revealed.

In this thesis there are a number of terms used to describe permanence. I first examine permanence in terms of ‘realms’ and ‘modes’. The realms describe the perspective from which permanence may be evaluated while the modes define how permanence is physically manifested. ‘Relative’ and ‘absolute’ are the two realms of permanence I discuss, while I divide the modes of permanence into ‘static’ and ‘dynamic’. Relative versus absolute permanence describes the *perspective*, creating boundaries around which permanence may be evaluated or discussed. Relative permanence admits to decay, to an end, while absolute permanence – permanence as we tend to think of it - fosters mystery, longing, hope, denial, and myth. Entropy governs relative permanence, measuring its years through evidence of decay. Absolute permanence stretches time into the imaginary, where inscriptions and dates engraved into foundations make the eternal visible, even through the decaying forces of time. The two modes of permanence, static and dynamic, describe the form permanence takes. In static permanence, the traditional form of permanence, a building endures in a single location. Dynamic permanence exists where the components of a building endure when reused in potentially numerous buildings, sites, and functions.

In analyzing the concept of permanence I focus on the question of material durability in contemporary culture. I have chosen to analyze and discuss four short essays offering different perspectives on this particular aspect of permanence: “The Modern Cult of Monuments: Its Character and Its Origin” by art historian Alois Riegl, “The Theory and Practice of Impermanence” by architect Edward Ford, “Architecture and the Symbolic Economy” by architect Luis Fernández-Galiano, and “Place: Permanence or Production” by architect and theorist Ignasi de Solà-Morales. Galiano and Ford outline several ways in which the traditional associations with permanence contribute to confusion and misunderstanding today. Riegl, at the beginning of the twentieth century, addresses monumentality and begins to liberate permanence from its historic associations by observing new manifestations that speak to the modern sensibility. Morales, a century later, analyzes the evolution of twentieth century perception and offers a visionary re-interpretation of permanence. Highlighting parallels and differences in these essays, I reveal a significant cluster of conflicts, which illustrate a cross-section of challenges that face permanence today.

These themes, as well as Vitruvius’ contribution to the question, are discussed critically in the inquiry section. ‘Plight of Material

Durability' juxtaposes the economic value of material durability in pre-technological eras with that of our contemporary capitalist society. '"Event" & the "Symbolic Economy"' examines the media culture's generative influence on 'revolutionary' or 'shock producing' architecture and the consequence of such an architecture. 'Places in Motion, Buildings in Motion' examines the traditional fixity of place associated with permanence. 'Myth of Permanence' examines the impact of lingering associations and beliefs in traditional, absolute permanence. 'Consequences of hierarchical permanence' studies the impact of different expectations of durability for different types of buildings and reveals the phenomenon of architects taking advantage of the inherent Western belief in the permanence of architecture to produce 'flimsy' buildings. Finally, 'Present tense of Permanence' exposes how permanence's imperceptibility in the present allows for an evasion of the consequences of decay as time passes.

This thesis tries to salvage an apparently dying concept at a pivotal point in history, when such a concept could be critically significant in addressing the problem of disposable architecture. The transient nature of our society is a reality that this thesis does not attempt to challenge; people will continue to move frequently, the real estate market will continue to go through cycles, etc. What this thesis focuses on is broadening the scope of permanence from its traditional Vitruvian definition to allow for more flexible and dynamic approaches to achieving material durability in the architecture of a transient society.

The current forms of valued permanence stem from a traditional definition of permanence: a Vitruvian *firmitas*. Though this type of permanence has important cultural significance, the nature of our contemporary society limits its applicability to an ever decreasing portion of our total built environment. As a specific response to the diminished capacity of permanence I suggest 'contrast-value' as a strategy for a contemporary manifestation of permanence that embraces the 'old' in terms of visible signs of aging, juxtaposed, and intensified in its juxtaposition, with the 'new' in terms of contemporary contributions. In this way both grounding and flexibility are achieved simultaneously. Contrast-value, by its very nature, is relative, and therefore well suited to our current state.

In order for permanence to be useful as a contemporary concept, we need to include within it an entire continuum of qualities - from relative to absolute and dynamic to static. Opening up the concept to join the flow of our culture reveals new manifestations of permanence emerging. A refreshed understanding of the scope and potential of the concept of permanence will increase its role and value in society – both from a cultural and ecological perspective. The overarching goal of this thesis is to encourage the concept of permanence to be manifested and employed in contemporary architectural theory and practice. Though it can imply rigidity, mass, solidity, history and the eternal, these are not its limits. Permanence can equally imply flexibility, economy of material, the future, and eventual demise. A more careful articulation and usage of the concept will go far, I believe, towards integrating it into a society defined by relativity, capitalism, and transience.

0.3
Marking the passage of time
October 2005

York St. & Front St.,
Toronto

Notes

[1] Galiano, "Architecture and the Symbolic Economy", p.44
[2] Brand, *How Buildings Learn*, p.10
[3] Marx, *Communist Manifesto,* from Marshall Berman's " All That Is Solid Melts Into Air", p.89

Concepts of Permanence:

Absolute, Relative, Static, Dynamic

> Embedded in the word permanence, and lending it its conceptual coherence, is an understanding of both "time" and "matter" whose own comprehensibility are, likewise, mutually dependent and affected by cultural and scientific insights. And it is, therefore, inevitable that changes in our definitions of 'time" and "matter" will also compel us to rethink the concept of "permanence". – Shadi Nazarian[1]

The conflicts I examine in the 'inquiry' section, over what constitutes 'permanence', based on the issues presented in the four essays, seem generally to stem from a casual, almost indifferent, interchangeability between the material and the immaterial, the real and the abstract, the relative and the absolute. Similarly, the examination of Vitruvius' text reveals an inconsistency between employing absolute versus relative statements. The difference between these two examples however lies in the 'perspective' of the ages in which they were written; Vitruvius lived in an age of absolutes, while we exist in a time of relativity. As architect Shadi Nazarian writes, our conception of permanence is intimately linked to our conception of both time and matter. In theory then, the discovery of the theory of relativity at the beginning of the twentieth century, instigating a series of perceptual shifts with regard to space and time, suggests that our conception of permanence has shifted in parallel. The extent to which this has occurred is debatable, however, as I discuss in the 'inquiry' section, pre-relativity perspectives are lingering and merging, or rather conflicting, with relative perspectives, to the detriment of material durability.

Whereas the use of absolute pronouncements in describing the substantive in Vitruvius' treatise serves as a means of emphatic expression in evoking the eternal, the mixing of realms today proves more complicated. As Fernández-Galiano observes: "Architecture involves an uncertain mix of solid reality and pale shadow."[2] Within the 'inquiry' section I examine conflicts caused by the use of the absolute in describing the material: 'gambling' material durability in the 'symbolic economy' through its association with the absolute, the influence of the media culture in blurring the boundaries between the rules that apply to images as compared with material things, the inconsistent expectations of durability between different types of buildings, and finally, the myth of permanence itself, which denies the necessity of maintenance and creates widespread disillusionment with the state and quality of contemporary construction.

On the one hand, the overlap between absolute and relative permanence lends architecture its mythical quality, a quality I do not wish to negate. However, it is important to recognize that there is a danger, with respect to material durability, in allowing the boundaries between these concepts to become too hazy or in simply forgetting they exist. For this reason I distinguish between some of the different connotations and implications of permanence. I break the concept up into 'realms' – absolute and relative - and 'modes' – static and dynamic. The absolute and relative realms define the *perspective* from which permanence may be judged. The static and dynamic modes define the *type* of permanence in question. Refreshing the concept through a close theoretical examination provides a more solid foundation upon which to untangle the conflicts surrounding its use.

Absolute versus Relative Permanence

> Entities existing in the physical world and those that live only in the minds of human beings both have durability. But the two obey quite different rules, and the destiny of objects made of resistant matter varies from that of their counterparts in memory. – Rudolf Arnheim[3]

The distinction between the physical world and the world of memories is an important demarcation between the realms of relative and absolute permanence. In contemporary society, permanence is generally perceived as an absolute concept. As such, complication arises when, from our relative perspective, the concept is used as an adjective to describe something we believe to be tangible and relative in the material world. Conflict arises immediately between an absolute descriptor describing a relative entity. However, the 'conflict' is only problematic if it is taken literally rather than figuratively. Splitting the concept of permanence into two by qualifying it as belonging to two different 'realms' - absolute or relative - minimizes the conflict, allowing the connotation of the concept to be judged on its intended meaning. Architecture has the capacity to achieve both 'relative permanence' and 'absolute permanence' either concurrently or independently without disagreement; it is a question of specificity.

Confusion between absolute and relative permanence might be understood in terms of reification; "the act of representing an abstraction as a physical thing"[4]. Hannah Arendt describes reification in *The Human Condition*:

> A true reification, in other words, in which the produced thing in its existence is secured once and for all, has never come to pass; it needs to be reproduced again and again in order to remain within the human world at all.[5]

To deny the necessity of cyclical production in order to achieve material permanence within our physical world is to believe in reification. The nature of architecture is bound deeply with humanity's struggle to achieve immortality – an example of attempted reification. In this process, architecture becomes a symbol of immortality and the power of this association is hard to deny, especially when it answers such a profound human need. Though it is tempting to assign the 'absolute' realm exclusively to the 'imaginary' and the 'relative' realm to the 'real', such a simplification risks denying the power and necessity of myth within our own material existence. The power of myths lies precisely in the fact that they cross the boundary, however tentatively or fleetingly, between the 'real' and the 'imaginary'. *The Epic of Gilgamesh* and Bede's famous quotation from an Anglo-Saxon prophecy reveal the power of myth and absolute permanence with which architecture is bound:

> Gilgamesh, having failed both chances, returns to Uruk, where the sight of its massive walls provokes him to praise this enduring work of mortal men. Gilgamesh realizes that the way mortals can achieve immortality is through lasting works of civilization and culture.[6]

> As long as the Colosseum stands, so shall Rome; When the

0.4
Absolute aspirations

Sandra Ainsley Gallery
February 2006

Distillery District,
Toronto

> Colosseum falls, so shall Rome; When Rome falls, so shall the world.[7]

Similarly, the struggle that perceptual psychologist Rudolf Arnheim[8] describes in the following passage provides a clear example of a person oscillating between absolute and relative perceptions of permanence, between myth and 'reality'. It is an example of an emotional, primary response battling with an intellectual rationalization:

> The destruction of buildings profoundly shatters our sense of safety. For a long time I was naively convinced of the immortality of buildings – a conviction derived from their visual and tactile permanence. Architecture was for me a part of the stable world, that immutable setting in which we human beings perform our entrances and exits. Thus, during World War II air raids in London, I was shocked to see buildings, intact the day before, torn open, their living rooms, bathrooms and broken walls exposed obscenely, like the intestinal hollows in a side of beef. Even so, the sense of the mortality of architecture has never quite taken hold of my mind. A building still looks to me like something neither made by man nor liable to destruction.[9]

It is the mortality of architecture that is an essential recognition within the realm of 'relative' permanence. Fernández-Galiano, in *Fire and Memory*, describes the limitation of the endurance of architecture in the material world through a description of the Tower of Babel:

> The ruins of the Tower of Babel are the archetypal representation of the mortality of architecture: the confusion of tongues interrupts the flow of information that holds up the building; without it, entropy breaks up what has been organized.[10]

Entropy, "the tendency for all matter and energy in the universe to evolve toward a state of inert uniformity"[11], is another term key to

0.5
Absolute aspirations
October 2005

Royal York Hotel,
York St. & Front St.,
Toronto

0.6
Evidence of entropy; relative permanence

Walnut Hall, (built 1853)
January 2006

Jarvis St. & Shuter St.,
Toronto

the distinction between relative and absolute permanence. Relative permanence accepts entropy as a reality, while absolute permanence denies the forces of entropy. Entropy, as a life force which architecture is composed of is a central theme in Galiano's book *Fire and Memory*. The distinction that Galiano makes between an architecture that acknowledges the life force of energy and one that does not is another way of distinguishing between the realms of relative versus absolute permanence. Acknowledging that architecture requires a continuous influx of energy, in the form of maintenance, is critical towards understanding the relative permanence of architecture. The following two passages from *Fire and Memory* illustrate, respectively, the difference between an absolute and a relative perspective, in terms of the absence and presence of energy:

> We are accustomed to thinking of [architecture] exclusively in terms of physical, mute, immutable objects; architects themselves like to photograph their buildings unfinished, silent and empty. It could be said that architecture is concerned solely with material forms, cold and intangible, situated beyond time.[12]

> The irruption of energy in the universe of architecture smashes its crystalline images, shakes its mute silhouette, and gives it a definitive place in the field of processes and life. Architecture can then be thought of as a transformation of the material environment by changing living beings, an artifact continuously altered by use and circumstance, in constant degradation and repair before the aggression of time, permanently perishing and renewing itself.[13]

If the permanence of substantive matter is perceived as being cyclical rather than linear it is possible to speak of the absolute permanence of substantive matter in a relative sense. I am referring specifically to a kind of 're-incarnation' where a material object disintegrates back into the earth to be remade in the future: the cycle itself is absolute while the specificity of the object within the cycle is relative. Hannah Arendt examines this relationship:

> The durability of the human artifice is not absolute; the use we make of it, even though we do not consume it, uses it up. The life process which permeates our whole being invades it, too, and if we do not use the things of the world, they also will eventually decay, return into the over-all natural process from which they were drawn and against which they were erected. If left to itself or discarded from the human world, the chair will again become wood, and the wood will decay and return to the soil from which the tree sprang before it was cut off to become the material upon which to work and with which to build.[14]

In this sense, then, permanence might be thought of or measured as the interval between successive cycles – the longer the interval, the more permanent or durable the object or "human artifice" is.

Acknowledging both absolute and relative permanence, it seems, is necessary in order to benefit from the unique qualities that pertain to each one; we require both a place for our memories and our immortal dreams as well as our connection with the natural cycles of life processes. Though, as I inferred above, there is risk in synthesizing the two concepts too closely, there is also incredible power and beauty

0.7
Static Permanence

A brightly polished angels foot, the door handle to a cathedral, indicates repeated use revealling the passage of time as well as a slow process of dissolution.

Orvietto Cathedral
November 2003

Orvietto, Italy

0.8
Static Permanence

The hollow of a step represents a generation's recorded footprint. The degree of smoothness and the depth of the hollow are measurements of the passage of time.

St. Andrew's Church
October 2005

Simcoe St. & King St.,
Toronto

in such synthesis. In *Timaeus,* Plato approaches, perhaps as closely as possible, the absolute, from a relative perspective:

> When the father who had begotten it perceived that the universe was alive and in motion, a shrine for the eternal gods, he was glad, and in his delight planned to make it still more like its pattern; and as this pattern is an eternal Living Being, he set out to make the universe resemble it in this way too as far as was possible. The nature of the Living Being was eternal, and it was not possible to bestow this attribute fully on the created universe; but he determined to make a moving image of eternity, and so when he ordered the heavens he made in that which we call time an eternal moving image of the eternity which remains for ever at one.[15]

Static versus Dynamic Permanence

To distinguish between static and dynamic permanence is to recognize the intrinsic qualities of 'traditional' permanence while broadening its overall definition. Traditional qualities associated with permanence stem from a linear, static model of the idea: continuity, stability, a tangible record of history, a measurement of time, a mnemonic aid. Dynamic permanence involves a flexibility of location and dispersion of distinct parts, each enduring in potentially unique applications and locations from their origin.

Static and dynamic permanence can be situated in either the relative or absolute realms. A static mode of permanence within a relative realm is perhaps the most familiar: a building, remaining fixed in its location, and accepted as needing continual maintenance and restorative work. A dynamic mode of permanence within a relative realm also accepts the need for repair but it is not bound to a single location or function: the wood from a factory stairwell being used for residential millwork. Within the absolute realm, the possibilities are as limitless as they are abstract: memories and myths blurring and evolving or remaining fixed and frozen forever.

At the risk of dynamic permanence sounding more ephemeral than permanent I will specify how its 'fleeting' nature is actually cyclically enduring. Dynamic permanence, though transient in its form and mobile, still refers to an indefinite endurance of the material itself, from form to form and location to location. Though consistent form and site may be fleeting, the material endures in its usefulness, as opposed to becoming waste. Dynamic permanence breaks down the building into individual components, each with its own potentially unique and enduring path. The continuum that permanence is composed of involves particles of matter constantly dissolving and releasing their energy into the universe. What distinguishes dynamic permanence, and all other types of permanence, from ephemerality is the pace of this dissolution; permanent things release energy like everything else, just more slowly.

Lucretius' *De Rerum Natura (On the Nature of the Universe)* provides a relative perspective on static permanence. Though initially it may seem odd to associate Lucretius with the word 'static', since his poetry is so full of nature's active cyclical patterns, the term refers to the fixed location of the object in question. Lucretius recognizes

0.9
Disassembly design

"… the team orchestrated the painstaking disassembly of the old MEC store located in the New Edinburgh area of Ottawa, with over 86% of the materials being reused or recycled." - Vince Catalli, Maria Williams

Mountain Equipment Co-op (opened June 2000)

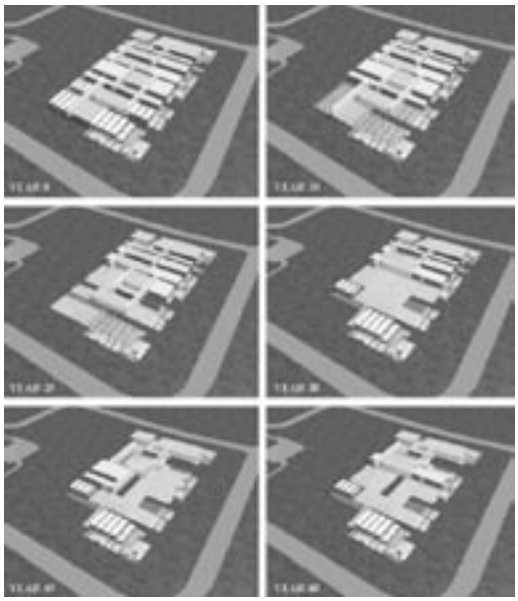
Linda Chapman & Christopher Simmonds Architects

Ottawa

1.0
"A diversified lifetime strategy was used to reduce the risk of a dysfunctional future utilization of the building and organize a staged reclamation of materials and components during building reconfiguration and at the end of service life. In essence, the distribution of a range of distinct lifetimes throughout the new facility allows for an array of investment levels over time." - John E. Fernandez 2003

British Petroleum North Sea Oil Exploration Headquarters, Conceptual Design

Scotland



the relative permanence of material form through the disintegration of objects in fixed locations; the very fixity of their location is fundamental to the way in which they dissolve. The objects that he describes respond, from their static position to *nature's* active cycles, affecting change within them. In this way Lucretius describes a static model of permanence from a relative perspective:

> Moreover, in the course of many revolving years, a ring on someone's finger is made thin by wear, and dripping water hollows a stone, and an iron plowshare imperceptibly diminishes in the fields. The paving-stone of the highway is all rubbed away by human feet, and brazen statues near the gates often have the right hand partly worn away as people pass along and touch it for a greeting. We know these things diminish, since they are rubbed

> away, and yet which particles fall off, and at what times, our jealous faculty of sight prevents us from seeing.[16]

Though the subject of the above verse is one of dissolution, permanence underlies each statement implicitly. From a relative perspective, permanence and dissolution are in fact on the same continuum, where permanence, without a continual supply of energy, steadily moves towards dissolution. If the above passage is read with this in mind, it becomes evident the *type* of dissolution is in fact dependent on static permanence, on a significant passage of time in a single location. The ability of soft human skin to sculpt metal requires static permanence; the ability of droplets of water to carve hard stone requires static permanence; and the ability of wind and rain to disperse a mass of solid iron requires static permanence.

Conversely, if the above verse is seen from the perspective of dynamic permanence, and, for instance, what was originally the ring was melted down to become part of a pot, the stone moved to become part of a retaining wall, the plowshare dismantled for re-used in other machinery, the materials would endure in their usefulness, however the passage of time would become potentially less distinctive and potentially imperceptible: the age of the metal from the ring is not evident within the pot.

Architectural manifestations of dynamic permanence include "disassembly design", "diversified lifetimes" and "rematerilization". Architect Dr. Philip Crowther defines 'disassembly design' as a process where buildings are designed in such a way that they may eventually be carefully taken apart so that the materials may be reused or recycled. He describes the ideal disassembly as being the "exact opposite of the assembly process", as opposed to demolition, it is a careful and time-consuming process of dismantling. Historical precedents of 'disassembly design' include timber frame shelters, sticks, and animal hide that evolved into the tent, timber peg construction, and pre-fabricated buildings such as the British portable colonial cottage and the Crystal Palace[17].

Designing for 'diversified lifetimes' involves strategizing in order to predict a variety of possible future conditions in which a building may be used. Architect John E. Fernandez describes diversified lifetime as "an architecture that promotes its own reassessment during its lifetime and thus allows for each future, and any scenario in between, to be possible." This design strategy anticipates the extreme possibilities of a building either becoming redundant and needing to be removed from the site or a building requiring expansion.

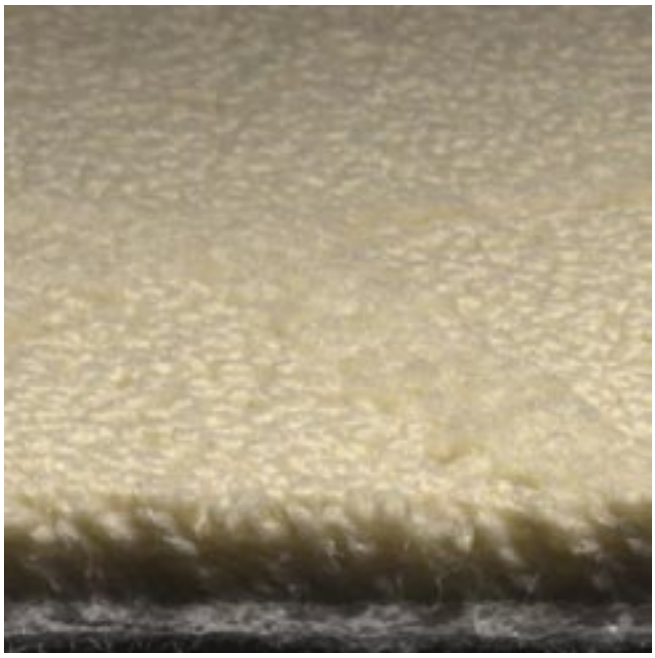
One other contemporary form of dynamic permanence is called 'rematerialization'. Architect William McDonough describes it as the infinite re-use of materials. McDonough speaks of the potential for materials to be re-used as "biological" or "technical" nutrients where they either biodegrade safely or can be used "infinitely" as synthetic ingredients. In the following excerpt he explains a possible process for rematerializing a variety of construction materials:

> The key to effective rematerialization is defining material chemistry and tracking material flows. A materials passport – a tracking code created with molecular markers, for example – makes that

1.1
Dynamic Permanence:
Rematerilization

"Shaw industries...has examined the material chemistry of its carpet fibre and backing to assess the healthfulness of its dyes, pigments, finishes and auxiliaries - everything that goes into carpet tile. Out of this rigorous process has come the promise of a fully optimized technical nutrient. Shaw now gurantees that all its nylon 6 carpet fibre will be taken back and returned to nylon 6 fibre, and its safe polyolefin backing returned to safe polyolefin backing."
-William McDonough, 2003

Shaw Industries Nylon carpet



> possible. The passport guides materials through industrial cycles, routing them from production through reuse, defining optimum uses and intelligent practices. With a passport, valuable construction materials can be rematerialized into valuable construction materials, not recycled into hybrids of lesser value heading inexorably towards the landfill.[18]

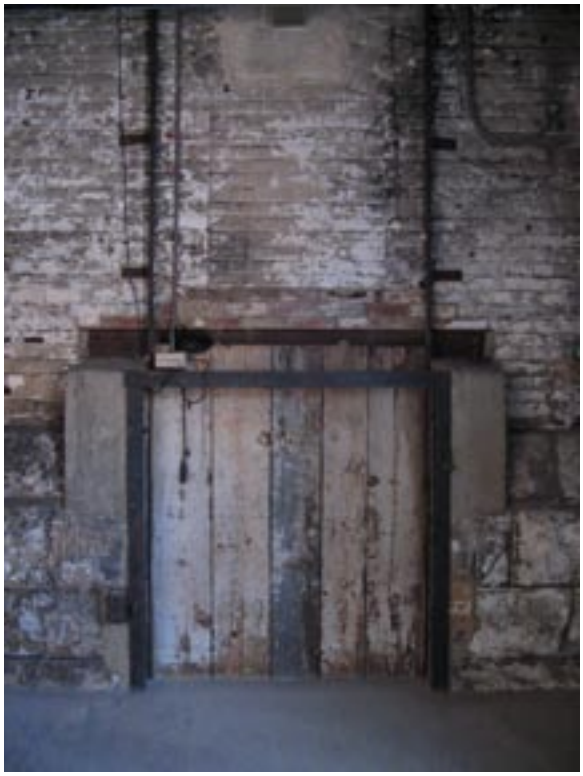
These forms of dynamic permanence - disassembly design, diversified lifetimes and rematerialiazation - can also complement situations of static permanence. Adaptive re-use, for instance, is static in the sense that it involves a consistent site and 'core' building while it is dynamic in that it may incorporate elements from a disassembly design or rematerialization within each successive stage of its programmatic evolution.

The static nature of adaptive re-use may be understood in terms of Aldo Rossi's terms, "propelling permanences" and "pathological permanences". Rossi describes propelling permanence as "a form of the past that we still experience" and pathological permanence as "something that is isolated and aberrant."[19] According to Rossi, examples of pathological permanence have lost their function while examples of propelling permanence have adopted new functions and therefore continue to function. However, despite their lack of "function" and "aberrant" nature he describes how pathological permanences continue to hold value:

> A function must always be defined in time and in society: that which closely depends on it is always bound up with its development. An urban artifact determined by one function only cannot be seen as anything other than an explication of that function. In reality, we frequently continue to appreciate elements whose function has been lost over time; the value of these artifacts often resides solely in their form, which is integral to the general form of the city; it is, so to speak, an invariant of it.[20]

1.2
Palimpsest Permanence
October 2005

Leader Lane & Wellington St.,
Toronto



1.3
Palimpsest Permanence

Sandra Ainsley Gallery
February 2006

Distillery District,
Toronto

1.4
Palimpsest Permanence

An obsolete message reveals a layer of history.

Sandra Ainsley Gallery
February 2006

Distillery District,
Toronto

1.5
Palimpsest Permanence

An obsolete grain chute remains as part of a contemporary office space.

Stone Distillery Building
February 2006

ERA Architects

Distillery District,
Toronto

Applying Rossi's terms to adaptive re-use, the act of a programmatic evolution within a building constitutes the propelling nature of adaptive re-use while the preservation or incorporation of 'obsolete' or 'functionless' elements constitute its pathological nature. By valuing and preserving 'obsolete' forms, statically permanent buildings become rich palimpsests, displaying layers of history. As such, adaptive re-use may be thought of as a form of propelling permanence with the ability to *absorb* pathological permanences.

In distinguishing between dynamic and static permanence lies the issue of the ability to *perceive* permanence. While both types of permanence value material durability, the potentially imperceptible nature of dynamic permanence questions the importance of the ability to perceive permanence. It raises an ethical debate between the promotion of material durability from a purely ecological perspective versus one that also incorporates cultural value. There are two issues relating to the perception of dynamic permanence: the ability to associate particular meaning with the history of a component once it has been displaced or re-used in a new location, and the ability to perceive traces of the passage of time through weathering or wear from use.

The phenomenon of Roman *spolia*, displaced re-used parts, is an example of dynamic permanence that, despite re-location, carries some of the 'traditional' qualities – ie didactic, mnemonic qualities - associated with static permanence. In "Roman Architectural *Spolia*" art historian Dr. Dale Kinney describes the use of spolia in Charlemagne's Aachen chapel completed in 790 AD. Though the authenticity of the spolia is questioned in this example, it demonstrates the ability of a displaced part to be valued for its ability to convey its historical origins:

> The columns were proclaimed *spolia* by Charlemagne's advisor Einhard, who wrote that Charles "was unable to find marble columns for his construction anywhere else, and so he had them brought from Rome and Ravenna." In fact, a number of the capitals have proven to be Carolingian simulations of *spolia*, and the authentic *spolia* did not necessarily come from Rome. It is usually assumed that the claim to have acquired spolia from the old imperial capital cities was made for programmatic reasons, to express Charlemagne's own pretensions to imperial status and grandeur…[21]

While Roman *spolia* may be anomalous insofar as they often display outstandingly clear, perceptible traces of their origins, there exist more subtle manifestations of perceptible permanence in a dynamic mode. While their specific history may not be perceptible or even traceable, the dynamic permanence of components that we can see, without the use of a microscope, will display signs of permanence similar to those associated with static permanence such as worn or layered patinas, indentations, engravings etc.

Material durability through rematerialization, using molecular tracking, while not perceptible to the human eye, also involves a means of tracing its history – though to what extent this information would prove culturally valuable is questionable. Interestingly, the above

1.6
Dynamic Permanence

Berkeley Castle
February 2006

A.J. Diamond Associates
(Renovation)

Berkeley St. & The Esplanade,
Toronto

quote from Lucretius also touches on the issue of perceptibility. He observes that we cannot perceive *incremental* changes caused by nature but rather the *cumulative* effect of these changes – a form of perceptible permanence.

> whatever age and nature adds to things little by little, to make them bigger, no eyesight can determine, be it ever so keen. And, conversely, when things grow old and waste away, like overhanging cliffs eroded by sea-water, what parts they lose, and when, no human eye can see. Thus does Nature do her work with invisible bodies.[22]

Static and dynamic permanence complement each other in a way similar to absolute and relative permanence. The dispersion of dynamically permanent components into an architecture that is statically permanent demonstrates their compatible relationship. In this way the inherent flexibility of dynamic permanence is extended towards static permanence, allowing a building to maintain its integrity of place and yet altering its form and potentially its function. Traditional permanence has been recognizable through the "cumulative" effect

of nature's work as Lucretius writes above; however opening up permanence to include dynamic forms, such as rematerialization, where such effects are no longer visible, raises the question of how important it is to perceive the passage of time within our human artifacts.

Notes

[1] Nazarian, Shadi, "The Future of Permanence: Re-Learning from Las Vegas", The Cornell Journal of Architecture, Spring 2003, p.18.
[2] Galiano, "Architecture and the Symbolic Economy", p.44.
[3] Arnheim, Rudolf, "Thoughts on Durability: Architecture as an affirmation of confidence", AIA Journal 66, (7), 1977, pp.48-50.
[4] http://www.thefreedictionary.com/reification
[5] Arendt, *The Human Condition*,p.138.
[6] Wikipedia, http://en.wikipedia.org/wiki/Epic_of_gilgamesh
[7] Venerable Bede (c. 673-735) quoting a prophecy of Anglo-Saxon pilgrims <http://en.wikipedia.org/wiki/Colosseum#Medieval_and_Renaissance>
[8] Rudolf Arnheim<http://en.wikipedia.org/wiki/Rudolf_Arnheim>
[9] Arnheim, Rudolf, "Thoughts on Durability".
[10] Galiano, *Fire and Memory*, p.88.
[11] http://www.thefreedictionary.com/entropy
[12] Galiano, *Fire and Memory*, p.4.
[13] Galiano, *Fire and Memory*, p.4.
[14] Arendt, *The Human Condition*, p.136.
[15] Plato, *The Timaeus*, p.50.
[16] Lucretius, *On the Nature of the Universe,* p.10.
[17] Crowther, Philip. "Historic trends in building disassembly".
[18] McDonough, William, and Michael Braungart. 2003. "Towards a sustaining architecture for the 21st century: The promise of cradle-to-cradle design" *United Nations Environment Programme Industry and Environment*, p.15.
[19] Rossi, *Architecture of the City*, p.60.
[20] Rossi, *Architecture of the City*, p.60.
[21] Kinney, Dale, "Roman Architectural *Spolia*", p.147.
[22] Lucretius, *On the Nature of the Universe*, p.10.

1.7
Transitioning between old and new Herringbone tile

LCBO
(previously North Toronto Station)
February 2006

Goldsmith Borgal Architects

Yonge St. & Summerhill Ave., Toronto

Definitions:

The Vocabulary of Permanence

We now turn our attention to etymologies and definitions to expand our generally accepted, current notion of permanence, denoting endlessness and immutability, to encompass a broader sense of the word, specifically a sense of relative permanence, indicating significant, but not endless duration. Both senses of the word, and many shades in between, are evident in these definitions. For example, 'permanent' is defined in the Oxford English Dictionary as "continuing or *designed* to continue indefinitely without change..." (my italics), allowing room for both absolute and relative interpretations of the term. Under 1.d. from the OED, there is a series of 'special collections' including permanent alimony, permanent dye, permanent pasture, permanent wave etc., implying permanence relative to and dependent on the duration of another entity such as a human lifespan, a piece of cloth, vegetation, or hair. Similarly, I identify ambivalence in Vitruvius' own definition of *firmitas*, as will be seen. Recognizing the shading in its definitions will serve to position it as being more flexible, and therefore more accessible in our culture of flux.

Also within this section is a pool of terms from the four texts that I will analyze as well as from other parts in the thesis.

N.B. The etymologies are incomplete where the definition does not relate to the thesis, or where the word is considered obsolete (unless it relates to the thesis).

etymology of permanent[1]

adjective [adaptation of Latin *permanent-em*, present participle of *permanere* to stay to the end, feminine PER – before 1100, 12th c. (1100 to 1200) + *manere* to stay; perhaps through French *permanent* (14th c.), Old French *perma-*, *permenant* (13th c. in F. Godefroy, Dictionnaire de l'ancienne langue française).]

1. a. Continuing or designed to continue indefinitely without change; abiding, lasting, enduring; persistent. Opposed to *temporary*.

1432-50 translated Higden (Rolls) II. 255 Other thynges be permanente as thei were [Higden caetera autem permanent].

1481 CAXTON Myrr. Prol. I Wordes ben perisshyng vayne & forgetful, And writynges duelle & abide permanent.

1526 Pilgr. Perf. (W. de W. 1531) 16 We haue no dwelling place ne Cite here permanent.

1610 WILLET Hexapla Dan. 80 A stable and permanent knowledge.

1780 HARRIS Philolological Enquiry Works. (1841) 467 Human institutions perish, but nature is permanent.

1832 HT. MARTINEAU Demerara ii. 25 There was a permanent population of 300 slaves on the estate at that time.

b. That remains fixed, motionless. (*Obsolete, rare.)*

1588 GREENE Perimedes 32 Richesse is .. as brittle as Glasse, standing vpon a Globe that is neuer permanent.

d. In special collections: as *permanent alimony*, alimony granted for life to a woman who obtains legal separation from her husband...; *permanent dye*, a long-lasting dye used in hairdressing;...*permanent pasture*, land left unploughed for a long period, used for growing grass;...*permanent wave*, a special process designed to produce a lasting wave in the hair...

3. *absolute or as substantive*

a. *the permanent*, that which endures or persists.

b. A permanent person or thing

d. = *permanent wave* above.

etymology of permanence[1]

[adaptation of medieval Latin *permanentia* (1319 in Du Cange), feminine *permanentem* PERMANENT (see – ENCE); perhaps through French permanence (Oresme, 14th c.), Old French *parmanance*, -menance (12-13th c.).]

1. The fact, condition, or state of being permanent; continued existence or duration; continuance, abiding.

1432-50 translated Higden (Rolls) II. 215 Assiduite of feyntenesse longethe to a man, impossibilite of permanence [HIGDEN *impossibilitas permanendi*] lyghtenes to falle.

1556 LAUDER TRACTATE (1864) 4 Hov kyngis hes no erthlie permanence.

1660 R. COKE *Justice Vind*. 2 Memory cannot be, without permanence of the thing perceived.

1830 LYELL Principle Geology I. III The permanence of the snow..is partly due to the floating ice.

2. The quality of being permanent; permanency, abidingness.

1677 (not later than) HALE Prim. Orig. Man. I. iii. 73 That hath or may have such a kind of permanence or fixedness in being.

1775 HARRIS Philos. Arrangem. Works (1841) 299 With respect to all kinds of qualities..there is one thing to be observed, that some degree of permanence is always requisite.

1841-4 EMERSON Ess., Spir. Laws Wks. (Bohn) I. 66 The permanence of all books is fixed by..the intrinsic importance of their contents.

1874 MICKLETHWAITE Modern Par. Churches 223 The essential quality of a monument is permanence.

eternal[2]

a. (-*lly*). That always (has existed &) will exist (*eternal life*; *eternal city, Rome*; *the eternal* TRIANGLE; *the Eternal* God); constant, too frequent.

entropy[3]

4. The tendency for all matter and energy in the universe to evolve toward a state of inert uniformity.
5. Inevitable and steady deterioration of a system or society.

> Through the inevitable increase of entropy associated with any interaction of matter and energy, irreversible changes and the direction of the movement of time are introduced into a universe Newton had described as being reversible and without history. Moreover, the increase of entropy is greater the faster the transformations – reversibility presupposes infinitely slow transformations – and this links the speed of processes to the increase of degradation while providing a valuable tool for analyzing the relation between the acceleration of changes generated by the Industrial Revolution on one hand and the depletion of natural resources on the other.[4]

absolute[5]

1. Perfect in quality or nature; complete.
2. Not mixed; pure.
3a. Not limited by restrictions or exceptions; unconditional.
3b. Unqualified in extent or degree; total.
5. Not to be doubted or questioned; positive.

relative[6]

1. Having pertinence or relevance; connected or related.
2. Considered in comparison with something else.
3. Dependent on or interconnected with something else; not absolute.

abstract[7]

1. Considered apart from concrete existence: an abstract concept.
2. Not applied or practical; theoretical.
3. Difficult to understand; abstruse: abstract philosophical problems.

reify[8]

To regard or treat (an abstraction) as if it had concrete or material existence.

absolute material permanence

The property of being able to exist for an indefinite duration, independent of entropy; an abstract concept where eventual material deterioration is denied.

relative material permanence

The property of being able to exist for an indefinite duration subject to entropy; eventual material deterioration is accepted.

static permanence

Permanence rooted in a fixed location producing stability and continuity in the built environment.

dynamic permanence

Permanence through a flexibility of location and, potentially, of function; involving all scales from building parts to entire buildings.

adaptive re-use

The altering of an existing environment to accommodate a change in function.

palimpsest[9]

1. A manuscript, typically of papyrus or parchment, that has been written on more than once, with the earlier writing incompletely erased and often legible.
2. An object, place, or area that reflects its history.

palimpsest permanence

Produced through items whose use has been abandoned yet whose physical form has been preserved to become expressive decoration, either in situ or in another location from their origin.

endurance[10]

1.a. The fact of enduring (pain, hardship, annoyance); the habit or the power of enduring; often *absolutely*, as denoting a quality, longsuffering, patience 1599.
1.c. Of inanimate things; the power of holding out; the capacity (e.g. of steel) of withstanding strain 1890.
2.a. Duration or continued existence in time. Also, power of lasting, capacity of continued existence 1494.
3. *concretely* That which is endured; a hardship 1555.
4. *attributively* (especially in specifically sense of the durability of metals), as *endurance limit, range, test* (= *fatigue limit, range, test*) 1902.

endure[10]

2. *intransitively* To last, continue in existence. Also, to persist, 'hold out' in any action, etc. 1386.
3. *transitively* To undergo, bear, sustain (continuous pain, opposition, hardship, or annoyance); *properly*, to undergo without succumbing or giving way. Also *absolutely* 1325.
3.b. Of things: To support (a strain, pressure, wear and tear, etc.) without receiving injury; formerly also *absolute*. Also in weaker sense, to undergo, suffer, be sugjectd to 1413.
4. To suffer without resistance, submit to, tolerate; to contemplate with toleration 1475.
4.b. With object *infintive* (with *to*), subbordinate clause, or accusative and infinitive 16th c.

durability[11]

[adaptation of late Latin *durabilitat-em* (Palladius), form of durabilis DURABLE.] The quality of being durable.

1. Continuance; lastingness, permanence 1374.
2. Capability of withstanding decay or wear 1600.

durable[11]

adjective [adoption of French durable (11th c. in Littré) = Italian *durabile*, Spanish *durable*, adaptation of rare Latin *durabilis* lasting, durable, formed on *durare* to last, endure, hold out, formed on *durus* hard, unyielding.]
1. Capable of lasting or continuing in existence; persistent, lasting; not transitory, permanent 1386.
2.a. Able to withstand change, decay, or wear 1398.
2.b. *specifically* Designating a class of goods the usefulness of which continues over a period of time, as distinguished from goods produced for immediate consumption. Hence as substantive plural (*rarely singular*), goods of this kind 1930.

Vitruvian permanence; *firmitas*

The ability of a building to endure based on its own material strength and soundness of construction; often defying both nature's and time's deteriorating effects.

firmitas[12]

-atis, feminine (firmus), *firmness, stability*. Literal: corporis, Cicero Transferred (i.e. used in an altered or metaphorical sense): *strength of mind, constancy*: animi, Cicero.

etymology of firmness[13]

The state or quality of being firm.

1. Solidity, cohesion, resistance to pressure.

1653 HOLCROFT *Procopius* II. 53 Which encreasing by degrees, crumbled and brake the firmeness of the stones.

1661 BOYLE *Spring of Air* III xxxi. (1682) 82 In the short history we have published of Fluidity and Firmness.

1799 KIRWAN *Geology Essay*, 108 Firmness is that coherence which reists percussion, and its opposite is brittleness, or fragility.

1852 CARPENTER *Manual Physical* (ed. 2) 155 The requisite firmness and solidity are given to the animal fabric.

2. The quality of being to a large extent unmoved or immovable; fixedness, stability.

1597 SHAKESPEARE 2 *Henry IV, III*. i. 48 Make the Continent (Wearie of solide firmenesse) melt it selfe Into the Sea.

1627 (not later than) HAYWARD *Edward VI* (1630) 13 Both the easinesse and firmnes [of the union] might be coniectured.

1703 MAUNDRELL *Journal Jerus*. 89 The whole work seems to be endued with such absolute firmness, as if it had been design'd for Eternity.

1802 PALEY *Natural Theologoy* viii. 3(1819) 86 By firmness I mean not only strength but stability.

3. The state or quality of being firm in mind; resolution, steadiness, steadfastness 1561.

4. *in commercial usage* Steadiness in price or of prices 1880.

etymology of stability[14]

The quality or condition of being stable

1. In physical senses.
a. Power of remaining erect; freedom from liability to fall or be overthrown 1426.
b. Fixity of position in space; freedom from liability to changes of place 1625.
c. Ability to remain in the same relative place or position in spite of disturbing influences; capacity for resistance to displacement; the condition of being in stable equilibrium, tendency to recover the original position after displacement. Also, of a body in motion: Freedom from oscilaation, steadiness 1542.
e. Of a system of bodies: Permanence of arrangement; power of resisting change of structure 1855.
f. Of a colour: Permanence 1791.
2. Of an immaterial thing: Immunity from destruction or essential change; enduring quality.
a. of government, institutions, customs, etc. 1470-85.
b. of the Divine nature or attributes (*?Obsolete*) 1594.
c. of wordly estate, financial affairs 1628.
d. of a science, theory, covenant, etc.
e. of natural laws or sequences of natural phenomena; also, of a physical property or the system possessing it 1836.
g. Something fixed or settled 1833.

3.a. Of a person, his character or dispositions: The condition of 'standing fast'; fixity of resolution or purpose; firmness, steadfastness. (The earliest recorded sense.) 14th c.
b. In the Benedictine order (translated Latin stabilitas) 1516.

ruin[15]

noun
1. Total destruction or disintegration, either physical, moral, social, or economic.
2. A cause of total destruction.
3. a. The act of destroying totally.
3. b. A destroyed person, object, or building.
4. The remains of something destroyed, disintegrated, or decayed. Often used in the plural.

Intentional Monument

According to Rigel, the intentional monument implies an intentional act of preserving an event in the consciousness of future generations through the endurance of the monument.

Historical Monument

According to Riegl, the historical monument is one where its value as a monument is determined subsequent to its design and construction. Their labeling as 'historical monuments' is a subjective title accorded to them by modern perception. It is also referred to as an 'unintentional' monument.

Age-Value

According to Rigel, age-value describes monuments that simply display evidence of the passage of time; through worn patinas, signs of wear or decay. Age-value can be perceived and appreciated regardless of education.

The Event

According to Morales, the 'event' constitutes the creation of place out of moments of intense shock inspired by the vibration, the point of encounter or the grasping of particular moments out of general chaos.

Contrast-Value

The combination of age-value with newness value creating a distinct, at times shocking juxtaposition. Similar to age-value, contrast-value can be perceived and appreciated regardless of education.

The Material Economy

According to Galiano, the Material Economy is one in which the construction and durability of buildings is governed by interest rates, returns on investments, maintenance and detailing.

The Symbolic Economy

According to Galiano, the Symbolic Economy is one that is primarily goverened by artistic interests, often superceding concern for material durability. If the building is considered a work of art, or iconic, its material durability may be ensured through subsequent investment by client or community.

Notes

1. The Oxford English Dictionary, Second Edition, prepared by J.A. Simpson and E.S.C. Weiner, Volume XI, Clarendon Press, Oxford, 1989

2. The Pocket Oxford Dictionary of Current English, compiled by F.G. Fowler & H.W. Fowler, 4th edition, Oxford, Clarendon Press, 1959

3. http://www.thefreedictionary.com/entropy

4. Galiano, Fire and Memory, p.50

5. http://www.thefreedictionary.com/absolute

6. http://www.thefreedictionary.com/relative

7. http://www.thefreedictionary.com/abstract

8. http://www.thefreedictionary.com/reification

9. http://www.thefreedictionary.com/palimpsest

10. The Oxford English Dictionary, Second Edition, prepared by J.A. Simpson and E.S.C. Weiner, Volume V, Clarendon Press, Oxford, 1989

11. The Oxford English Dictionary, Second Edition, prepared by J.A. Simpson and E.S.C. Weiner, Volume IV, Clarendon Press, Oxford, 1989

12. Cassell's New Latin-English English-Latin Dictionary, D.P. Simpson, Cassell, London, 1975

13. The Oxford English Dictionary, Second Edition, prepared by J.A. Simpson and E.S.C. Weiner, Volume V, Clarendon Press, Oxford, 1989

14. The Oxford English Dictionary, Second Edition, prepared by J.A. Simpson and E.S.C. Weiner, Volume XVI, Clarendon Press, Oxford, 1989

15. http://www.thefreedictionary.com/ruin

1.8

August 2005

Mount Royal Park,
Montreal

Vitruvian Permanence

Though permanence may be generally considered as an absolute state or concept, it enters the realm of the relative through its association with architecture, or any other human creation for that matter. Formally, the concept is introduced into architectural discourse in Vitruvius' *Ten Books of Architecture* as '*firmitas*'. The general effect of this union I examine in the 'concepts' section. This section explores the relationship between the absolute and the relative through excerpts on the subject of, or relating to, permanence from Vitruvius' treatise. The purpose of this examination is to recognize the origin of what we now consider the 'traditional' understanding of permanence in architecture in order to better understand how and why this view of permanence is held to be incongruous today:

> The places of present-day architecture cannot repeat the permanences produced by the force of the Vitruvian *firmitas*.[1]

I suggest that the Vitruvian conception of permanence holds a dominant association with the absolute, and since we are currently in an age of relativity, an absolute concept is bound at least to fit uneasily, if not trigger rejection, in contemporary thinking. However, on closer examination, it is evident that Vitruvius does not employ exclusively absolute vocabulary; he often oscillates between relative and absolute. I distinguish between the advice that Vitruvius offers with respect to achieving prolonged material durability, in a relative sense, from his evocations of the eternal. This ambivalence, or inconsistency, may have given rise to conflicting understandings of the term, which will be explored in the 'inquiry' section: unrealistic expectations of durability, mythical permanence, the symbolic economy etc. In delineating these two perspectives I reveal the possibility of introducing Vitruvian '*firmitas*' into our current age of relativity, opening a channel through which 'traditional' permanence might become a contemporary concept.

In perhaps the most famous passage of the *Ten Books*, Vitruvius positions *firmitas* within the triad of architecture, along with *venustas*, beauty, and *utilitas*, which might be translated as usefulness or functionality. He delivers this message in an imperative tone. The conditional 'assurance' of material durability seems to convey a promise of an absolute endurance.

> All these must be built with due reference to durability, convenience, and beauty. *Durability will be assured* (my italics) when foundations are carried down to the solid ground and materials wisely and liberally selected;..."[2]

The following passage is an example of the way Vitruvius oscillates between absolute and relative perspectives. The first half of the paragraph conveys a sense of the absolute, with expressions such as "lasting endurance" and a defiance of nature and time's decaying effects. In the last sentence, however, he softens his defiance of time and allows for a relative permanence where decay will be kept at bay for a *significant* period of time – but not forever:

> The thickness of the wall should, in my opinion, be such that armed men meeting on top of it may pass one another without interference. In the thickness there should be set a very close succession of ties made of charred olive wood, binding the two faces of the wall

> together like pins, to give it *lasting endurance* (my italics). For that is a material which *neither decay, nor the weather, nor time can harm* (my italics), but even though buried in the earth or set in the water it *keeps sound and useful forever* (my italics). And so not only city walls but substructures in general and all walls that require a thickness like that of a city wall, will be *long in falling to decay* (my italics) if tied in this manner.[3]

In discussing material selection for the construction of city walls, Vitruvius concedes the 'ideal' material, burnt brick, may not be available everywhere and therefore advises to make do with available local materials. He mitigates this less than ideal scenario with a hopeful absolute projection:

> For it is not every neighbourhood or particular locality that can have a wall built of burnt brick like that at Babylon, where there was plenty of asphalt to take the place of lime and sand, and yet possibly each may be provided with materials of equal usefulness so that out of them a *faultless* (my italics) wall may be built to last *forever* (my italics).[4]

Leading up to the following passage, Vitruvius discusses the damage caused by rubble within cavity walls, drying up the mortar that binds them resulting in a ruin; the end result of a ruin being the "disaster" to which he refers. Whether these 'deficient' rubble-filled walls last one hundred years or five hundred years before they become ruins is immaterial; they will become ruins and are therefore flawed in their failure to "endure to eternity".

> He who wishes to avoid such a disaster should leave a cavity behind the facings, and on the inside build walls two feet thick, made of red dimension stone or burnt brick or lava in courses, and then bind them to the fronts by means of iron clamps and lead. For thus his work, being no mere heap of material but regularly laid in courses, will be *strong enough to last forever without a flaw* (my italics), because the beds and builds, all settling equally and bonded at the joints, will not let the work bulge out, nor allow the fall of the face walls which have been tightly fastened together.
> Consequently, the method of construction employed by the Greeks is not to be despised. They do not use a structure of soft rubble polished on the outside, but whenever they forsake dimension stone, they lay courses of lava or of some hard stone, and, as though building with brick, they bind the upright joints by interchanging the direction of the stones as they lie in the courses. Thus they *attain to a perfection that will endure to eternity* (my italics).[5]

In his introduction to Book II: IX and Book VII, below, Vitruvius attributes value to his advice based on the degree of permanence it will procure. Though subtle, there is a distinct shift from an absolute to a relative perspective that distinguishes the prelude of Book II:IX from Book VII. Something that simply denies time's passing evokes absolute permanence while something that evades deterioration for a long time ("to a great age") implies eventual end and therefore evokes a sense of relative permanence.

> Next, following the guidance of Nature, I shall treat of the frame-work and the kinds of wood used in it, showing how they may be procured of a sort that will *not give way as time goes on* (my italics).[6]

> In the following book I shall treat of the kinds of polished finish

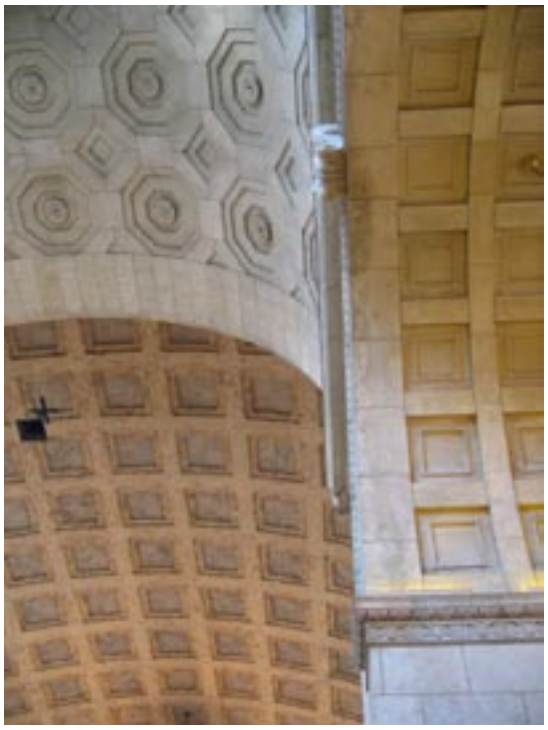
> employed to make them elegant, and *durable without defects to a great age* (my italics).[7]

The following passage distinguishes expectations of permanence relative to different parts of the building. The parts Vitruvius says must be "solid" are the foundations, substructures and walls. Only relative permanence is needed elsewhere, where parts such as tiles, roof timbers and rafters should be durable, but not 'permanently durable'. This mixture again exposes the duality of perspectives that Vitruvius employs, revealing further evidence that the origin of our conception of permanence in architecture is not purely absolute.

> I have now shown how buildings can be constructed *without defects* (my italics), and the way to take precautions against the occurrence of them. As for replacing tiles, roof timbers, and rafters, we need not be so particular about them as about the parts just mentioned, because they can easily be replaced, however defective they may become. Hence, I have shown by what methods the parts which are not considered solid can be rendered *durable* (my italics), and how they are constructed.[8]

Notes

[1] Morales, "Place: Permanence or Production", p.103
[2] Vitruvius Pollio, and M. H. Morgan. 1960. Vitruvius : The ten books on architecture [De architectura.], Book I, Chap.3.2
[3] Ibid, Book I, Chap. 5.3
[4] Ibid, Book I, Chap.5.8
[5] Ibid, Book II, Chap.8.4,5
[6] Ibid, Book II, Chap.8.20
[7] Ibid, Book VI, Chap.8.10
[8] Ibid, Book VI, Chap.8.8



1.9
Intentional Monument

Union Station
October 2005

Bay St. & Front St.,
Toronto

Distillation of four positions on permanence

The following section seeks to distill four essays on the subject of permanence in modern society. The art historian Alois Riegl focuses on the evolution of our perception of the monument. The architect and theorist Ignasi de Solà-Morales charts the evolution of our spatial perception, separating the creation of meaningful places from permanence of location. The architect Edward Ford focuses on the existence and consequences of lingering traditional conceptions of permanence within contemporary society. And the architect Fernández-Galiano distinguishes between material durability within a symbolic versus a material economy. This section does not offer analysis or speculation; instead it serves as a backdrop to the subsequent 'inquiry' section, which will analyze 'conflicts' and 'solutions' with regards to the matter of material durability in contemporary culture.

Distillation 1

The Modern Cult of Monuments: Its Character and Its Origin

Alois Riegl

Introduction to Distillation

At the beginning of the twentieth century, Alois Riegl writes that the modern appreciation and valuation of art had altered the traditional definition of what a 'monument' was. The intention of his essay is to allay misunderstanding between historic and modern definitions and valuations of monuments, in the interest of preserving them. No longer bound to an artistic canon, the scope of appreciation for monuments expanded significantly. With a modern notion of history, defined by development, Riegl further expands the definition of a commemorative monument. Characteristics that qualify an artifact as a commemorative monument, according to Riegl, range from traditional evidence of intentionality to a representation of a significant phase in history, to physical signs of aging. However, even as he opens up the definition of what a commemorative monument is with the rising cult of 'age-value', he reveals how such a perspective, linked to an appreciation of natural decay, inherently conflicts not only with practical aspects of functionality but with an age-old appreciation of man's ability to create "accomplished artifacts" – universally recognizable in their completeness or "newness".

Distillation

In "the modern cult and preservation of monuments", or "monuments of art and history" as distinguished from the traditional category of purely "intentional monuments" - Riegl sees three main categories of works: intentional, historical and age-value. In order to clarify how the modern appreciation of monuments has altered, Riegl examines the distinction between these three categories as well as how each came into being. He also examines perceptions of art-value, which Riegl maintains, have a significant influence over the preservation of monuments. Finally, he filters his definitions and observations through a modern lens to reveal the monument's position at the beginning of the twentieth century.

Distinguishing between the Intentional, Historical, and Age-Value monument

> A monument in its oldest and most original sense is a human creation, erected for the specific purpose of keeping single human deeds or events (or a combination thereof) alive in the minds of future generations.[1]

Alois Riegl distinguishes between three types of monuments: intentional, historical, and age-value. This "intentional" monument, as defined above, can be manifest in two ways: the "artistic" and the "literary". The former uses art and iconography to convey a message while the latter uses inscription. In an "intentional" monument, it is common for the two techniques to be employed simultaneously.

Riegl defines "historical", "unintentional" monuments as those built without the intention or expectation that they would be left to future generations. Their creators were primarily concerned with the contemporary, and perhaps one subsequent, generation. The fact they

are labeled “historical monuments” is a subjective title given to them by modern perception. Riegl summarizes the distinction between intentional and historical monuments like so: “In the case of the intentional monument, its commemorative value has been determined by the makers, while *we* have defined the value of the unintentional ones.”

Riegl’s third category of monuments gains its commemorative value by manifesting the passage of time. Riegl defines “age-value” monuments:

> These monuments are nothing more than indispensable catalysts which trigger in the beholder a sense of the life cycle, of the emergence of the particular from the general and its gradual but inevitable dissolution back into the general. The immediate emotional effect depends on neither scholarly knowledge nor historical education for its satisfaction, since it is evoked by mere sensory perception.[2]
>
> The traces of this process testify to the fact that a monument was not created recently but at some point in the past, and the age-value of a monument therefore rests on the obvious perception of these traces… Age-value manifests itself less violently, though more tellingly, in the corrosion of surfaces, in their patina, in their wear and tear of buildings and objects, and so forth. The slow and inevitable disintegration of nature is manifested in these ways.[3]

Unlike age-value monuments, historical monuments derive their value not in their display of age or decay, but rather in how well they are preserved in order to accurately represent their original state. The more the monument strays from its original state the less historical value it carries: “That the Parthenon survives solely as a ruin can only be regretted by the historian, regardless of whether it is considered representative of a particular stage in the development of Greek architecture and construction…”[4]

Between age-value and historical-value a conflict exists between the treatment of monuments:

> Natural decay cannot be reversed, and should not be, from the standpoint of historical value, but continuing decay in the future, while acceptable and in fact inevitable for age-value, is pointless and must be avoided from the standpoint of historical value, because further decay would make scientific reconstruction of the original artifact correspondingly difficult.[5]

Riegl softens the boundaries between historical and age-value monuments. An advocate of age-value, he reasons, would accept the addition of an awning to protect a fresco in the face of a violent storm: “To those who prize age-value, the more delicate hand of man then appears as the lesser of two evils when compared with the violence of nature.”[6] In this way Riegl attempts to mitigate the conflict between the “conservative” historical value preservationist with the “radical” age-value advocate. In the end, however, he considers age-value as being the more viable of the two:

2.0
Historical Monument

Constructed c. 1834, the Elihu Pease House is designated under the Ontario Heritage Act. It is an example of what Riegl would classify as a 'historical' or 'unintentional' monument. It was saved from demolition in 2002 when Shane Baghai, a Toronto developer, purchased it and moved it to its present location in between two condominium towers at the 'Residence of Avondale' in North York. (Ontario Heritage Connection)

Elihu Pease House
January 2006

ERA Architects

Harrison Garden Blvd. &
Avondale Ave.,
Toronto

> Permanent preservation is not possible because natural forces are ultimately more powerful than all the wit of man, and man himself is destined to inevitable decay.[7]

One of the distinguishing features of age-value over the other commemorative values that Riegl stresses is its universal appeal. Age-value is immediately obvious; no education or training is required to recognize it:

> Age-value in a monument betrays itself at once in the monument's dated appearance. That it so appears depends less on its unfashionable style, since this might be imitated and therefore recognized only by trained art historians, than on the fact that age-value lays a claim to mass appeal. Its incompleteness, its lack of wholeness, its tendency to dissolve form and color set the contrast between age-value and the characteristics of new and modern artifacts.[8]

The approach to the preservation of age-value monuments also differs fundamentally from the approach to intentional and historical monuments. In fact the 'preservation' of age-value is ultimately one of non-intervention where nature is simply allowed to take its course without human interference: "[Thus] the cult of age-value contributes to its own demise."[9]

> From the standpoint of age-value one need not worry about the eternal preservation of monuments, but rather one should be concerned with the constant representation of the cycle of creation, and this purpose is fulfilled even when future monuments have supplanted those of today.[10]

> As long as mankind does not renounce earthly immortality, the cult of age-value will always oppose that of intentional commemoration.[11]

2.1
Age-value

A worn threshold, now disused
September 2005

Cambridge, Ont.

Riegl dismisses such conflicts as being relatively irrelevant considering the small number of intentional monuments in comparison to unintentional ones. He predicts that age-value, being the most modern commemorative value and applying to the largest number of monuments, will be the most likely to "prevail" in the future.

The relationship between the three categories of monuments and the passage of time provides the final means of differentiation:

> While age-value is based solely on the passage of time, historical-value, though it could not exist without recognizing time's passage, nevertheless wishes to suspend time. Intentional commemorative value simply makes a claim to immortality, to an eternal present and an unceasing state of becoming. It thereby battles the natural processes of decay which militate against the fulfillment of its claims. The effect of nature's actions must be countered again and again. A commemorative column with its inscription effaced, for example, would cease to be an intentional monument. The intentional monument fundamentally requires restoration.[12]

The evolution of the Intentional, Historical and Age-Value Monument: a history of preservation

Riegl relates the evolution of the monument from "intentional" to "historical" and finally to a recognition of "age-value". The development of age-value, out of intentional and historical valuation, was sparked in the late eighteenth century in connection with the "emancipation of the individual in modern times"[13]. He specifies this evolution as:

> the desire to transcend an objective physical and psychic perception in favor of a subjective experience. This becomes clear in the transformation of commemorative value as described above,

> inasmuch as historical value recognizes individual events in an objective manner, while age value disregards the localized particulars and treats every monument without regard to its specific objective character.[14]

Historically, Riegl notes, intentional monuments were not necessarily preserved, except perhaps by those who had an immediate interest or relationship to them. It was not until the fifteenth-century in Italy that they were bestowed with "commemorative value", signaling an awakened consciousness similar to the modern approach. Different than the appreciation medieval Romans felt towards the monuments of ancient Rome due to their association with imperial grandeur, this new form of commemorative valuation resulted from "an increasing appreciation of their artistic and historical values".[15]

> for the first time people began to recognize earlier stages of their own artistic, cultural, and political activities in the works and events that lay a thousand years in the past. The interest in specific intentional monuments, an interest which typically tended to vanish with the disappearance of those who created them, now was revitalized, as an entire population began to regard the achievement of earlier generations as part and parcel of their own. Thus the past acquired a present-day value for modern life and work.[16]

From the Italian Renaissance, Riegl jumps to the nineteenth century where the next major development in the valuation of monuments occurred: the recognition of age-value. Riegl attributes this recognition to the nineteenth century's consuming interest in history, especially the "minutiae":

> The new postulate resided in the conviction that even the smallest particular within a developmental chain was irreplaceable and that within this chain even objective value adhered to objects wherein the material, manufacture, and purpose were otherwise negligible. With this unavoidable and constant dwindling of the objective value in monuments, the development itself became, as it were, the source of values which necessarily began to eclipse the individual monument. Historical value, which was tied to particulars, transformed itself slowly into developmental value, for which particulars were ultimately unimportant. This developmental value was none other than the age-value we have encountered before; it was the logical consequence of the historical value that preceded it by four centuries. Without historical value, there could not have been an age-value. If the nineteenth century was the age of historical value, then the twentieth century appears to be that of age-value.[17]

To a certain extent, Riegl clarifies, age-value relies on historical value. He observes that the satisfaction one derives from age-value comes in part from placing the monument within a time period – even in the broadest, most general categories, such as medieval, modern, or contemporary. He therefore cautions against a complete separation of categorizing age-value from historical value.[18]

Monuments of art and history

Riegl focuses on the transition from the past's absolute, objective valuation of art to the modern, subjective, relative valuation of art, a

point of view that denies the possibility of a canon. Riegl notes that "according to current notions, there can be no absolute but only a relative, modern art-value"[19]. For this reason, the notion of historical art-value is critical to the modern sensibility, because it provides a benchmark by which to compare our own value of art. Art-value, therefore, may either be defined in relation to eternal art-value, bound by an objective canon, the historic definition of art-value, or modern art-value - ie *Kunstwollen* (artistic will).

Riegl distinguishes between historical value and artistic value with respect to the visual arts and all other artifacts. He defines historical value as something that "seems to represent a conspicuous phase in the development of a specific branch of human activity."[20]

Artistic value is more complicated to define. Riegl approaches a definition for artistic value from two perspectives; the first, "art-historical", is ultimately bound to a value associated with historical development; the second is independent from historical development and relies solely on purely artistic value.

Riegl observes that modern art-value is attributed based on *Kunstwollen*, or artistic will. He defines the *Kunstwollen* as a dichotomy where two separate defining characteristics, each contributing to the *Kunstwollen*, can never be manifested simultaneously. The first he calls 'newness-value'; the second 'relative art-value'. In keeping with historical valuation, Riegl observes that 'newness-value' (exhibiting no sign of decay in shape or colour) alone is enough for art-value to be attributed to a work of art. Newness-value, Riegl notes, can be appreciated by anyone, regardless of education. Relative-art value however "can only be appreciated by the aesthetically educated modern person."[21] Relative art-value is defined based on a recognition that the *Kunstwollen* is not static but rather continuously evolving and therefore offers a vehicle for the appreciation of earlier works that may not necessarily fit in with the modern *Kunstwollen*.

Present-Day Values versus Commemorative Values

At the beginning of the twentieth century, Riegl observes, modern taste values modern creations over the commemorative value of monuments. This affinity for newness, Riegl notes, actually leads to a desire to make older monuments appear new. Despite age-value's rising acceptance, Riegl explains that the deep rootedness of newness-value remains dominant:

> The masses have always enjoyed new things and have always wanted to see the hand of man exert its creative power rather than the destructive effects of nature. Generally, only new and whole things tend to be considered beautiful; the old, fragmentary, and faded are thought to be ugly. What is rooted in thousands of years of perception – namely, the priority of youth over age – cannot be eliminated in a few decades. The apostles of age-value initially met with great resistance, because most people considered it natural to repair the damaged edge of a piece of furniture or to restucco a sooty wall.[22]

He therefore concludes that modern taste tolerates evidence of decay, age-value, only so far as it does not conflict with practical functionality or "use-value". "Use-value" in buildings, which promotes safe and functional environments, becomes a priority in the present.

> Only works for which we have no use can be enjoyed exclusively from the standpoint of age-value, while those which are still useful impede such pure contemplation.[23]

Conclusion

By assigning value to the recognition of the passage of time, Riegl lays the foundation for the proliferation and preservation of permanence in the built environment at large. The dilemma of where to situate age-value in a society that worships newness-value yet, at the same time, recognizes and values the natural process of aging remains at the beginning of the twenty-first century. The fragmentation of our environment, caused by our transitory culture may actually inspire new ways to address this dilemma. Fragmentation causes pieces to disconnect and reconnect; some remain fixed while others disperse. Inevitably in such an environment, a purely static, linear permanence, where a building maintains its form from newness-value to age-value until it either becomes a ruin or is demolished, all undisturbed in a single location, is increasingly rare. Alternatively, sequences that interrupt uniform development inspire fragments of the new to be placed alongside fragments of the old at the same time. I discuss this phenomena further, in terms of "contrast-value" and "weathering", in the 'inquiry' section.

Notes

[1] Riegl, "The Modern Cult of Monuments: Its Character and Its Origin", *Oppositions*, no.25 (Fall), p.21
[2] Ibid, p.24
[3] Ibid, p.32
[4] Ibid, p.34
[5] Ibid, p.34
[6] Ibid, p.35
[7] Ibid, p.37
[8] Ibid, p.31
[9] Ibid, p.33
[10] Ibid, p.33
[11] Ibid, p.38
[12] Ibid, p.38
[13] Ibid, p.29
[14] Ibid, p.29
[15] Ibid, p.26
[16] Ibid, p.26
[17] Ibid, p.28
[18] Ibid, p.35
[19] Ibid, p.23
[20] Ibid, p.22
[21] Ibid, p.42
[22] Ibid, p.42
[23] Ibid, p.42

2.2
The Illusion of Durability

St. Andrew's Terrace
September 2005

Cambridge,Ont.

Distillation 2

The Theory and Practice of Impermnence: The Illusion of Durability

Edward Ford

Introduction to Distillation

Edward Ford argues that unrealistic expectations exist for the durability of buildings today. In relation to the concepts of permanence that I define, 'durability' is equivalent to 'relative permanence', where, without maintenance, eventual material disintegration is expected. Ford argues that this concept of durability in architecture is clouded by lingering "ideological baggage"[1] which prevents us from viewing architecture like we look at a car or plane, where obsolescence and routine maintenance are expected. In other words, there exists an "illusion" that buildings are self-sufficiently permanent. His solution for encouraging durability is to match modern construction techniques with equally sophisticated long-term maintenance routines, "to acknowledge that, whatever its imagery, a Modern building is a complex piece of equipment"[2]. However, he qualifies this solution by acknowledging such a system would require an advocate to ensure it is put into practice – a role formerly assumed by the architect who, for various reasons, has been removed from it, leaving no one responsible for a building's durability.

Distillation

Ford prefaces his argument with the following question: "is Modern Architecture less durable than traditional, and if so, is this a result of ideology, practice, or both?"[3] He argues that a basic assumption, involving the expectation that upon completion buildings should endure with minimal maintenance, and furthermore that "important" buildings should endure even longer, needs to be questioned. Ford's argument is organized into the following sections: durability in traditional building, durability in traditional theory, durability in modern theory, durability in modern construction practice, and finally, the architect's role. In 'Durability in traditional building' Ford describes the association between traditional architecture and permanence as so fundamental to the contemporary mindset that it "overlooks" those instances when this association is questioned:

> We may or may not have a deep-seated need to believe in the transience of contemporary buildings, but there is ample evidence that we do have a deep-seated need to believe in the permanence of traditional buildings, and we have developed a tendency to overlook those instances when these works fail to meet our expectations.[4]

He distinguishes between Eastern and Western perceptions of monuments that have been rebuilt: while both the Ise Shrine, in Japan, and the Parthenon are reconstructed versions of the original, the cyclical history of the Ise Temple is celebrated while the Parthenon's numerous reassemblies and repairs are "suppressed by common consent, subject to a kind of collective amnesia in which the modern replacement is treated as the original"[5]. Ford questions how the Western perspective considers Ise a reconstruction while the Parthenon, even though it is reconstructed with its original stones, is considered original. He observes this tendency to be a general Western

phenomenon:

> The idea that important buildings should be not only durable but also permanent is so integral with the Western idea of architecture as to escape notice, except by those critical of Western civilization as a whole.[6]

Ford argues that during the nineteenth century a desire for durability in the form of mass and solidity was held. He cites James Fergusson, a nineteenth century architectural historian:

> The length of time during which architectural objects are calculated to endure confers on them an impress of durability which can hardly be attained by any of the sister arts. Sculpture may endure as long, and some of the Egyptian examples of that art found near the Pyramids are as old as anything in that country, but it is not their age that impresses us as the story they have to tell … From that time onward the architects have covered the world with monuments that still remain on the spot where they were erected, and tell all, who are sufficiently instructed to read their riddles aright, what nations once occupied these spots, what degree of civilization they had reached, and how, in erecting these monuments on which we now gaze, they had attained that quasi-immortality after which they hankered. Sculpture and painting, when aligned with architecture, may endure as long, but their aim is not to convey to the mind the impression of durability which is so strongly felt in the presence of the more massive works of architectural art. Even when ruined and in decay the buildings are almost equally impressive, while ruined sculptures are far from being pleasing objects…[7]

Gothic revivalists such as Viollet-le-Duc and William Lethaby who "maintained that style and beauty, as represented by the Gothic cathedral, were the result of economy of material"[8] he includes in the argument to illustrate that alternative opinions existed in the nineteenth century challenging the 'norm' that Fergusson's perspective represents. Ford summarizes the essential difference between these two nineteenth century paradigms of 'good construction' with the Gothic cathedral and the Parthenon respectively, "obtaining the maximum space with the minimum material and obtaining the maximum space with the minimum material *plus* whatever excess is required to convey permanence".[9] Ford observes that conflicting perspectives on "the role of durability" in architecture continue to exist in Modern Theory. He summarizes them as follows:

> That good construction equals minimal material.
> That architectural form is temporal.
> That architecture is the expression of permanence through solidity and mass, regardless of the quantity of material required.[10]

Next, he looks at detailing in modern works. Although he acknowledges many failures in this area, most notoriously in the works of Buckminster Fuller (Geodesic domes), Le Corbusier (Swiss Pavilion, Salvation Army Building), and Gropius (Bauhaus Building) he does not accept 'poor detailing' as a viable reason for the short lifespan of modernist buildings designed according to the 'minimalist ideal'. He reasons that there have equally been modern detailing works, such as the curtain walls in Gropius' Faguswerk and Albert Kahn's Midwestern

factories, that have endured, at least in part, until the present. He argues that modernist buildings failed "in large part because the architectural ideas that informed them were not shared by their ultimate users … poor maintenance, and obsolescence notwithstanding."[11]

He observes a relationship between Western Modernism and Eastern ideology, which he describes as "The acceptance of the temporality of the physical manifestation of architecture,"[12] and a recognition that "neither concepts nor forms are permanent, and that both are perhaps disposable."[13] Italian futurist architect Sant'Elia, Ford explains, was the first to articulate this idea of disposability in architecture in his futurist manifesto of 1914:

> [T]he fundamental characteristics of Futurist architecture will be its impermanence and transience. Things will endure less than us [sic]. Every generation must build its own city. This constant renewal of the architectonic environment will contribute to the victory of Futurism…[14]

Sant'Elia, Ford explains, was arguing that architecture be treated like an industrial product rather than an "indestructible icon"[15]. 'High Tech' architects such as Norman Foster and Richard Rogers have accepted this idea, and have used it especially in their designs for mechanical systems, which they estimate will last for an average of thirty years (they estimate the average lifespan of a building to be fifty years). Although Ford accepts their theory of 'early obsolescence' for mechanical systems he is critical of their solution, which is to externalize mechanical systems so they can easily be replaced, when a number of other building components may have even shorter life spans. Ford recognizes the complexities of equating architecture and industrial products and attributes our resistance to this equivalence due to the perceived iconographic role of architecture:

> If an architectural work is to symbolize permanence and stability, it is difficult to regard it with the same attitude with which we would approach a washing machine. We are scandalized at the need to recaulk buildings on a ten- to twenty-year cycle. The doors of the F-117, the stealth fighter, must be recaulked before every flight. We bring different ideological baggage to buildings and are often uncomfortable with the idea of transience and impermanence in thinking of the institution and the monument.[16]

He reveals the disparity in the expectation of longevity between industrial products and architecture: "No one would buy a car, a plane, a yacht, or a refrigerator on the assumption that it would last for eternity."[17] Despite the ideological dilemma, Ford recommends that we at least adopt the attitude that architecture requires maintenance in order to last. However he acknowledges the complexity of overcoming such a shift in thinking:

> We equate architecture with permanence and stability; we equate permanence and stability with mass and solidity; and we have not, as Le Corbusier predicted, come to regard a house with the same attitude with which we regard an automobile or computer. If the idea of obsolescence and routine maintenance is more readily acceptable in the case of the latter, it is perhaps because it plays a

> smaller role in our sense of well-being.[18]

Within 'Durability in Modern Construction Practice' Ford describes the reasons for the shift from the solid, monolithic wall towards the layered, veneered assemblies. Factors such as "specialization of building components, the need for fireproofing, and the decline of the load-bearing wall in favor of the curtain wall"[19], are listed as having been the primary impetus behind the shift, rather than a change in ideologies. He also discounts the criticism of those in favour of the monolithic system who are critical towards the veneered system, arguing that while there exist numerous failed layered assemblies there exist plenty of successful ones as well. Ford states:

> To ascribe recent building failures to the modern construction industry's tendency toward veneered construction implies that the alternative – the monolithic concrete and masonry structures beloved of Modern architects – would have fared better. Yet history belies this.[20]

Despite the reluctance of contemporary architects to embrace the veneered wall system, Ford advocates it as a significant improvement, citing examples such as the rain screen principle and its substantial increase in thermal and vapour control. He concedes that the veneered system is inferior in only its structural capacity, which he argues is no longer its primary function. Ford simplifies the essence of the veneered wall: "it is a system that does not seek a perfect wall, but that assumes leaks, condensation, and other problems will occur and plans accordingly."[21] Modern construction, having changed significantly from traditional construction, requires a change in perspective, expectations and maintenance strategies.

Ford concludes by speculating on the critical role of the architectural profession of ensuring long-term maintenance is practiced.

> The traditional role of the architect as advocate of the concerns of permanence against the concerns of expediency is one from which he or she is often excluded by modern construction practices. Many have been glad to forsake this role. There is a tendency, perhaps growing, for architects to migrate into related, nontraditional fields, leaving behind what they consider the minutiae of the profession – those issues dealing with construction – to specialists, to consultants, to engineers, to contractors. It is a practice that is probably in many cases necessary, but if the architectural profession cannot accomplish so simple a task as the correct building of a wall, a window, a roof, or a door, it can hardly expect society to entrust it with the city.[22]

Conclusion

A widespread but misguided belief in the permanence of traditional buildings is compelling proof that permanence does carry significance in contemporary culture. Whether or not traditional buildings endured longer than contemporary ones is not the issue; the issue is that there is a *perception* that they did, and this perception carries significant consequences. The 'inquiry' section will pick up on two such consequences: the perception that the importance of a building translates proportionally into its inherent permanence and the mythic

permanence of architecture itself leading to a disconnection with the necessity of maintenance as an integral and natural component of the endurance of any human creation. Ford's text reveals the necessity to distinguish between relative and absolute permanence – our failure to grasp this distinction leads to a greater culture of architectural disposability.

Notes

[1] Ford, Edward, "The Theory and Practice of Impermanence: The Illusion of Durability", p.5
[2] Ibid, p.7
[3] Ibid, p.2
[4] Ibid, p.2
[5] Ibid, p.3
[6] Ibid, p.3
[7] Ibid, p.3
[8] Ibid, p.3
[9] Ibid, p.3
[10] Ibid, p.3
[11] Ibid, p.4
[12] Ibid, p.4
[13] Ibid, p.4
[14] Ibid, p.4
[15] Ibid, p.4
[16] Ibid, p.5
[17] Ibid, p.5
[18] Ibid, p.5
[19] Ibid, p.6
[20] Ibid, p.6
[21] Ibid, p.7
[22] Ibid, p.7

2.3
The Symbolic Economy

Villa Savoye

Le Corbusier

France

Distillation 3

Architecture and the Symbolic Economy

Luis Fernandez-Galiano

Introduction to Distillation

Luis Fernández-Galiano condemns architects for their contribution towards a society that places so much focus on the symbolic rather than the material economy. The majority of the symbolic economy encompasses structurally 'impermanent' buildings propped up by society as a result of their iconic status. In contrast, buildings of the material economy, the majority, must endure by their own means after being subject to the harsh realities of interest rates and returns. Galiano argues the confusion between these two economies contributes to a 'profound misunderstanding' of the nature of durability as well as a significant portion of malpractice claims against the profession. Durability, he claims, is dependent on low interest rates, high maintenance, and careful detailing, and, just as importantly, an acknowledgment of its inherent value.

Distillation

Galiano searches for an authority or a phenomenon that can be held responsible for the durability, or lack thereof, of buildings. In this short article he attributes this responsibility to the architect and focuses on the implications of his or her role within two very distinct economies: the material and symbolic. Galiano reveals the impetus for his analysis in his assessment of the current durability of architecture:

> Architecture involves an uncertain mix of solid reality and pale shadow; it has always been a delicate balance, and of late the shadows have gotten the upper hand.[1]

He condemns architects for contributing to lowered expectations of an acceptable concern over the durability of buildings, creating a culture where "hot images, hot words, hot air"[2] take precedent over more practical considerations. He implicates architecture schools and magazines in this problem, for their role in defining these values. However, he refrains from blaming them entirely, recognizing the media culture in which they operate as having a much more influential role:

> In its present form, words like "durability" have lost their currency. In the fleeting world of images, attention zigs and zags through a huge assortment of fleeting architectural shadows - images on flickering screens or crowded boards, consumed almost as soon as they are conceived. We used to complain about paper architecture; now the paper has thinned to tissue, and we are faced with the infectious spread of kleenex architecture.[3]

Within this media culture propelling us forward, Galiano observes a tendency to seek stability and points of reference from the past. Such fixities, he observes, assume the role of delivering us from the uncontrollable reality of the present. Though he notes that the issue of durability, as a concern, is apparent in such a climate, he observes that it is discussed primarily in theoretical rather than practical terms:

> From the primeval geometries of Aldo Rossi to the thick, tactile walls of Rafael Moneo, a fertile stratum of European architecture is anchored in this archaic sense of permanence. Here, durability

> is not a functional or practical concern, but an ontological or theoretical issue: endurance is pursued as the key element of an intellectual agenda that is at once critical and elegiac.[4]

Galiano describes the current trend in architecture as favouring the artistic rather than the conservative. Within this climate, architects, he argues, are faced with the challenge of creating "revolutionary agendas" in the sense of being "unusual" or "unexpected". Pressed by these demands, "conservative" realities such as site, client, program, budget, building systems, etc. inevitably become viewed as constraints on artistic freedom. Galiano outlines the basis for this "symbolic economy" in Jean Nouvel's redefinition of the role of durability:

> contemporary durability is not to be found in the *firmitas* of construction, but rather in the *venustas* that manages to capture collective imagination: if the building becomes a revered icon, society will ensure its endurance, continuously repairing the ravages of time so that it always appears fresh and newly born.[5]

The Villa Savoye, which, Galiano notes, has been restored numerous times, fits Jean Nouvel's interpretation. He also cites Peter Eisenmen's decision with the Arnoff Center where, confronted with an 'inadequate' budget, he chose to produce a formidable image rather than a durable one. Galiano speculates on the logic behind such a decision, reasoning that should the building become an icon, its endurance will be assured by faithful conservation efforts on the part of the owners and, if it should not, its existence will at least have been worthwhile as an event: "like an architectural butterfly whose flapping wings send ripples over the surface of the architectural sea."[6] In this way Galiano explains the incongruent relationship between the symbolic and material economies. He further details the distinction between the two, emphasizing the proportionally small sector that the symbolic economy represents in comparison to the material economy:

> Most of these considerations [bankruptcy of projects blamed on 'ostentatious' designs], however, refer only to that tiny portion of architectural production that belongs to the realm of the symbolic economy; these thoughts apply hardly at all to most buildings, those located firmly within the bounds of the material economy. Here, durability depends upon such mechanisms as rates of interest and returns on investment; the higher the rates, the faster the return and the flimsier the construction. In the final analysis, all those theories of life-cycle costing devolve into theories of maintenance: the life of a building depends on initial investment as much as on adequate maintenance, and there are many ways to balance the two. Short-term durability must often be understood as small initial investment or poor maintenance; in fact the amount of care that any building requires exposes the inherent fallacy of the concept of "user-friendly, maintenance-free" architecture.[7]

Although, Galiano remarks, the symbolic economy can in fact stimulate the material economy, the consequences of confusing the two are found in common cases where ambitious young architects strive to deliver buildings intended to be treated as icons and which sacrifice physical durability. Rarely is the aim achieved and the result is a decaying building and embittered clients.

> For the profession of architecture, the confusion between the symbolic and material economies produces profound misunderstanding, not to mention those many claims of malpractice that concern durability.[8]

In summary, Galiano makes a last case for a renewed awareness, and implementation, of practices aiding durability in architecture today:

> Low interest rates, high maintenance, and careful detailing: all are required if buildings are to last; but so too is the willingness to acknowledge the value of durability. Durability is desirable for architects and clients, and for society at large, which can ill afford the needless waste of ephemeral buildings.[9]

Conclusion

The existence of the symbolic economy is itself a commentary on the value contemporary culture places on permanence, fostering an uncomfortable, shaky, uncertain, and artificial material durability. However, the distorted interpretation of permanence it carries to the elite buildings that come under its protection is not Galiano's main cause for concern; rather it is its contamination of the management of material durability within the material economy. In this way Galiano identifies the source of a significant misunderstanding of contemporary durability, probably contributing to the mistrust of contemporary durability that Ford observes. Within the 'inquiry' section, I situate the symbolic economy as being symptomatic of a larger trend of capitalist culture, disassociating the physical strength of materials from their value.

Notes

[1] Fernández-Galiano, Luis, "Architecture and the Symbolic Economy", p.44
[2] Ibid, p.44
[3] Ibid, p.44
[4] Ibid, p.44
[5] Ibid, p.44
[6] Ibid, p.44
[7] Ibid, p.46
[8] Ibid, p.46
[9] Ibid, p.46

2.4
The ‘Event’

The Royal Ontario Museum under renovation
May 2006

Studio Daniel Libeskind

Avenue Rd. & Bloor St., Toronto

Distillation 4

Place: Permanence or Production

Ignasi de Sola-Morales

Introduction to Distillation

Ignasi de Sola-Morales regards Vitruvian permanence as irrelevant at the end of the twentieth century. Einstein's theory of relativity, existentialism, and the media culture have all brought significant change to our conception and perception of architecture. Contemporary culture, which he defines as a 'media culture' characterized by rootlessness, transmitting mechanically reproduced images across distances unmediated by time, causes architects to decide whether 'place' is generated by 'permanence' or 'production'. Within such a culture, Morales views the characteristics of "place as permanence"; duration, stability, and the defiance of time's passing, as being irrelevant. In addition to this being an age of media culture, he characterizes the present as an age of agnosticism, further discrediting the idea of cultivating and maintaining a *genius loci* (the spirit of a particular place). Instead, Morales aligns himself with "place as production", advocating the idea of architecture as "event", a momentary alignment amidst our present chaos. He qualifies the "place of production" that he envisions: "It is not a question of producing an ephemeral, instantaneous, fragile, fleeting architecture. What these lines seek to defend is the value of places produced out of the meeting of present energies, resulting from the force of projective mechanisms capable of promoting intense, productive shock."[1]

Distillation

Morales attributes the advent of "architectonic space", where human perception is as instrumental to the creation of space as the architecture that surrounds it, to Einstein's theory of relativity, which bound together space and time. Space, previously measured solely by quantitative, material data, was now equally a matter of human perception: "movement, vision, and touch act together in the production of a global, sentimental experience…"[2] As a result, architectonic propositions actually created space rather than resulted from space:

> Space was no longer perceived as an initial datum, an a priori starting point upon which the architect's work intervened; instead, space itself resulted from an architectonic proposition. Space, and the infinite spatio-temporal experiences that the architect could create, became the final objects of architectural invention. They were not cause but consequence in a universe where relativity- not only physio-mathematical but biological, psychological, and philosophical as well – constituted an entirely new point of view.[3]

This new perspective was primarily influential on a psychological level towards inspiring innovation. In architecture, Morales describes how the multiplicity of new directions that architectonic space had the potential to inspire was primarily influenced by the "psychological empiricism"[4] of *Neue Sachlichkeit* (new objectivity) and "functionalist techniques"[5]: "for these architects, human perception, experience, and needs could be codified purely mechanically."[6]

During the 1950s, existentialism inspired another ideological shift, away from the "abstract character of the notion of space"[7] of early modernism, towards a notion of 'place' inspired by the particular. Existentialism, Morales writes, "proposed putting into practice [the phenomenologist] Edmund Husserl's maxim of a return to things in themselves"[8].

> Just as there were no universal essences, only particular concrete historical existences, neither were there any spaces created in vitro, any experiments of a general character. Instead, architecture was expected to interrupt the endless horizons of earth and sky, creating specifically determined, essentially defined qualities of place.[9]

The role of architecture in this sense was to *reveal* rather than create the particular nature of a site: "The work of architecture is no more than a patient recognition, a laborious cultivation of seeds that only await the hand of whomever is capable of making them grow and bear fruit."[10]

Existentialism caused "radical" change in European and American architecture in the 1950s. In the works of Alvar Aalto, Nordic empiricism, team X neoexistentialism, and Italian historicism, there was a common "attention to particular qualities, over sweeping manifestoes and general assertions"[11].

> each movement underscored the conviction that architecture was not so much a productive, industrial activity as a craft, necessarily bound up with the genius loci – the history, myths, symbolism, and signification of a place.[12]

Morales refers specifically to the historian and critic Christian Norberg-Schulz's work as having been influenced by existentialism, and particularly by the German philosopher Martin Heidegger. He describes Schulz's analysis of architecture and place:

> [Norberg-Schulz] analyzes architecture primarily as an activity that signals places. Place is recognition, delimitation, the establishment of confines. The genius loci is evidently a mythical divinity, a private demon that inhabits a particular site, which architecture makes manifest, celebrates, interrogates, and heeds. Geography and history join hands in the architectural place that precisely defines space and time. This notion of place corresponds to a continualist conception of the architectural process. Architecture's vocation lies in its service to the discovery of what already exists prior to it, as a permanent background against which it illuminates roots, outlines, and unvarying constants.[13]

The influence of existentialism on architecture produced both a "trivialization of historical styles" as well as a "genuine, sincere return to languages determined by time and history"[14]. The former he refers to as "banal" while the latter, Morales observes, "produced a literally conservative culture of the city, imitative of the past and committed above all to recuperation, permanence, custody, and remembrance of the genius of the place."[15] Despite great ideological and stylistic differences, Morales cites Aldo Rossi and Robert Venturi as sharing "the notion of place" as a principal concept behind their work. For Rossi, the focus was on "architecture as a continual return

to archetypes: permanent immutable forms constituting the consistent identity underlying insignificant surface changes"[16]. For Venturi, context is "nothing other than the manifestation, in linguistic terms, of the central condition of architecture as a reflexive meditation on a world of already written words."[17]

Morales presents the growth and eventual dominance of media culture as the next fundamental shift affecting our perspective on architecture:

> Ours is a media culture where distances are reduced to the point of being virtually instantaneous, and where the reproduction of images by mechanisms of every kind has meant that an image is no longer lined to any one place but instead floats unattached across the length and breadth of the planet.[18]

Though the disassociation of place with particularity has produced myriad of opportunities, it has come at a significant cost:

> While this ubiquitous society, this global village, generates experiences of simultaneity, multiple presence, and the constant generation of new stimuli, it has also produced feelings of profound estrangement. We are strangers in our own land, as Julia Kristeva has suggested, acknowledging the paradox that our modern universality simultaneously engenders expulsion and exile. Our art and literature return time and time again to the contemporary individual's experiences of loneliness and isolation.[19]

Morales uses Kristeva's observations to describe the deconstructivist movement of the late 1980s as being symptomatic of such feelings of estrangement. Characteristics of "deconstructive" architecture include decomposition, distortion, ambiguity, and formalism, dominated by a sense of "cultural emptiness and nihilism".

> These displacements mark a reaction against the structuralist order, the exhausting presence of archetypes, and continuity as a primary value in space and in historical consciousness. These deconstructivist architectures correspond both to the estranging context of our global village and to the destructive, negative energies that permeate a cultural situation in which the increasingly unsettling absence of principles becomes bearable only through private manifestations of resistance and individualism.[20]

More generally, Morales reflects that:

> recent architecture provides no places, no dwellings in which to halt and rest. The monuments for memory are archaeological ones, disconnected fragments only partially excavated, filled more with questionings and doubts than with comfortable presences.[21]

Under the weight of the media culture, Morales observes our culture's lack of aspiration towards a defiance of time, a necessary goal, he observes, to the production of 'permanent' places. Instead he offers hope in the creation of place out of the "event":

> there is also a culture of the event: a culture that, in the moment of fluidity and decomposition leading toward chaos, is capable of generating instants of energy that from certain chaotic elements construct – out of the present and toward the future – a new fold in multiple reality. That which was many folds over on itself, manifesting an *any* that can arrive at a one.[22]

He describes the "event" as a vibration, a point of encounter and a grasping:

A "vibration": "the undulation of an element that extends across those that follow it, establishing, like a light or sound wave, a system of harmonics in the air that subsist for a time before dissipating."[23]

A "point of encounter": "a conjunction whereby the lines of a limitless itinerary cross with others to create nodal points of outstanding intensity."[24]

A "grasping": "the action of a subject who, within the chaotic flux of events, arrests those moments that most attract or impel, in order to hold on to them. It is a subjective action, producing a moment of pleasure and fragile plenitude."[25]

> Although the event is always something that takes place in a global disorder devoid of meaning, this happy moment – at times accidental, at times the result of a willing intellect – constitutes an outstanding instant in a constant flux, a harmonious, polyphonic chord in a situation of permanent transition.[26]

Morales relates the event to the aesthetic experience of the sublime. Modern aesthetics are associated the sublime as classical culture was associated with beauty. He explains how since Aristotle "the true, the good, and the beautiful have been interwoven and are therefore inseparable"[27]. In our modern culture, however, the philosophers Edmund Burke and Immannuel Kant have offered us the sublime as an alternative model of aesthetics, associated with the event:

> the sublime constitutes another form of aesthetic experience that is, once more, pure event: something new that, even if only for an instant, fictively produces a parallel world, a Zwischenwelt, as Paul Klee called it. Out of the essential indeterminacy of the conflictive and changing modern world, art opens up spaces of visual, auditory, or emotional intensity, hoping to bring about a shock, an experience stripped of references, disarmed in relation to the imitation of nature. Only the intensity of this shock guarantees the potency of the avant-garde work of art. Pure event as the result of a deliberate action.[28]

Ultimately, Morales rejects the viability of place as permanence in a culture that does not seek to defy time's passing. Again, he offers the "event" as an alternative to place as permanence. Yet the permanence that he rejects is not one of material durability, but one that relies on the past in order to create meaningful places:

> The places of present-day architecture cannot repeat the permanences produced by the force of the Vitruvian firmitas. The effects of duration, stability, and defiance of time's passing are now irrelevant. The idea of place as the cultivation and maintenance of the essential and the profound, of a genius loci, is no longer credible in an age of agnosticism; it becomes reactionary. Yet the loss of these illusions need not necessarily result in a nihilistic architecture of negation. From a thousand different sites the production of place continues to be possible. Not as the revelation of something existing in permanence, but as the production of an event. It is not a question of producing an ephemeral, instantaneous, fragile, fleeting architecture. What these lines seek to defend is the value of places produced out of the meeting of present energies, resulting from the force of projective mechanisms

capable of promoting intense, productive shock.[29]

Conclusion

The focus of Morales' essay is the transformation of the production of place, and it is the consequences of such transformations towards the concept of permanence that I discuss in the 'inquiry' section. Though we are not a culture that seeks to defy time's passage, he observes that we remain a culture that seeks meaningful places. Just as Riegl releases permanence from the traditional monument, Morales releases permanence from a denial of time's passing in a fixed location. I combine the 'event' that Morales proposes as an alternative to places produced by "the force of Vitruvian firmitas" with Riegl's newness-value and age-value. Morales' 'event' serves as a vision of dynamic permanence maintaining meaningfulness amidst chaos.

Notes

[1] Sola-Morales, Ignasi, *Differences*, "Place: Permanence or Production", p.104
[2] Ibid, p.94
[3] Ibid, p.95
[4] Ibid, p.96
[5] Ibid, p.96
[6] Ibid, p.96
[7] Ibid, p.96
[8] Ibid, p.96
[9] Ibid, p.96
[10] Ibid, p.97
[11] Ibid, p.97
[12] Ibid, p.97
[13] Ibid, p.98
[14] Ibid, p.98
[15] Ibid, p.98
[16] Ibid, p.98-99
[17] Ibid, p.99
[18] Ibid, p.99
[19] Ibid, p.99
[20] Ibid, p.100
[21] Ibid, p.101
[22] Ibid, p.102
[23] Ibid, p.102
[24] Ibid, p.102
[25] Ibid, p.102
[26] Ibid, p.102
[27] Ibid, p.103
[28] Ibid, p.103
[29] Ibid, p.103-104

2.5
Contrast-Value

Fresh runners overlay the original, bowed with age.

National Ballet School of Canada
February 2006

KPMB, Goldsmith & Borgal Architects

Jarvis St. & Carlton St., Toronto

An Inquiry into Contemporary Permanence

This section examines contesting views of permanence today, bringing together issues discussed in the above four articles. The challenging environment in which permanence has been operating in during the last century has led to a confrontation between traditional notions of permanence and modern adaptations, at times leading to unrealistic expectations on all sides. Marshall Berman's analysis of modern culture's preoccupation with dissolution and the ephemeral in 'All that is Solid Melts Into Air' clarifies the extent and nature of this 'challenging' environment in terms of its antithetical nature to a concept like permanence. No single approach resolves the question of permanence's value today: contemporary manifestations of permanence distort traditional notions of permanence to the point of being unrecognizable while the myth of traditional permanence overpowers rational thought and clouds judgment. Such a climate of confusion and conflict impairs the value of permanence, whether traditional or visionary.

By recognizing age-value, valuing the perception of time's passing, Alois Riegl begins to reassess permanence at the beginning of the twentieth century, releasing the monument from its strict association with a purely intentional permanence and, consequently, releasing permanence from its dominant association with the monument. In architect Dr. Thordis Arrhenius's comments on Riegl's essay, she notes, "the logic of the monument is turned upside down, fragility rather than permanence becomes its mark."[1] At the end of the twentieth century, not only is the monument 'turned upside down' in relation to permanence but so too is 'place', in Morales' essay, material durability, in Galiano's, and 'the myth of permanence' as well as the architect's role in it, in Ford's. Through all of this upheaval there is a sense the tight, familiar associations of permanence are unraveling. My intention in examining our transforming notions of permanence in contemporary culture is to highlight the conflicts that relate to the value of material durability and the implied consequence on the environment.

2.6
Considered a modernist landmark, the Bata Shoe Headquarters was designed by John B. Parkin Architect in 1964. The building is scheduled for demolition to clear the site for an Ismaili cultural complex to be built by the Aga Khan Foundation.
(Toronto Star, Hume, Sept. 2005)

Bata Shoes Headquarters
September 2005

Parkin Architects
built 1964

DVP & Eglinton Ave.,
Toronto

2.7
Pending Demolition

Bata Shoes Headquarters
August 2006

The Plight of Material Durability

Three tiers of economic drivers affect the value we place on material durability towards the endurance of buildings today: the "symbolic economy", the "material economy", and the real estate market. Buildings in the "symbolic economy", Galiano observes, are often built with a disregard for material durability; rather, their durability is left to the chance that through 'potential' iconic status the client or public will contribute sufficient funds in order to preserve their form. Within the "material economy", in which the majority of buildings operate, Galiano observes that high interest rates, leading to "flimsy" construction, low initial investment, and lack of proper maintenance, threaten material durability. Between these two economies alone, Galiano perceives a "profound misunderstanding relating to durability"[2]. However, the real estate market eclipses both the symbolic and material economy in terms of its power to render material durability meaningless:

> There is no art as impermanent as architecture. All that solid brick and stone mean nothing. Concrete is as evanescent as air. The monuments of our civilization stand, usually, on negotiable real estate; their value goes down as land value goes up.[3]

In Western society, the permanence of buildings has become all but unrelated to the materials composing them. With regards to the disposability of architecture and the amount of waste this generates, this is perhaps the most fundamental dilemma of our time. Vitruvius, in contrast, presented a direct, complimentary relationship between the two. Architecture historian Reynar Banham's observations on the historical relationship between material durability and endurance compliment the logic behind a specific excerpt from Vitruvius' treatise, while an excerpt from Marx reveals the stark contrast of our capitalist condition:

> [Banham:] The traditions of architecture, as we commonly understand the concept, have been forged in societies and cultures that are committed to massively structural methods of environmental management. Furthermore, the accumulation of capital goods and equipment needed to produce even a moderate level of civilized culture in pre-technological societies, required that building materials be treated as if valuable and permanent. It was necessary not only to create habitable environments, but to conserve them… Buildings were made to last, and had to be, in order to produce a sufficient return in terms of shelter performance over the years to justify the expenditure of labour and materials that went into them.[4]

> [Vitruvius:] One who in accordance with these notes will take pains in selecting his method of construction, may count upon having something that will last. No walls made of rubble and finished with delicate beauty - no such walls can escape ruin as time goes on. Hence, when arbitrators are chosen to set a valuation on party walls, they do not value them at what they cost to build, but look up the written contract in each case and then, after deducting from the cost one eightieth for each year that the wall has been standing, decide that the remainder is the sum to be paid. They thus in effect pronounce that such walls cannot last more than eighty years. In the case of brick walls, however, no deduction is made provided

2.8
Age-Value

September 2005

St. Andrew's St.,
Cambridge, Ont.

2.9
The 'Event': Contrast-Value

National Ballet School of Canada
February 2006

KPMB, Goldsmith Borgal
Architects

Jarvis St. & Carlton St.,
Toronto

> that they are still standing plumb, but they are always valued at what they cost to build."[5]
>
> [Marx:] The pathos of all bourgeois monuments is that their material strength and solidity actually count for nothing and carry no weight at all, that they are blown away like frail reeds by the very forces of capitalist development that they celebrate. Even the most beautiful and impressive bourgeois buildings and public works are disposable, capitalized for fast depreciation and planned to be obsolete, closer in their social functions to tents and encampments than to Egyptian pyramids, Roman aqueducts, Gothic cathedrals.[6]

The historical necessity or value of material durability contrasts greatly with the current trends of disposability; evident in the demolition statistics. It is ironic that the environmental crisis we are in, largely the product of our technological achievements, positions the value of material durability from a pre-technological society as being desirable. A lack of material durability, necessitating high turnover rates of production is advantageous to the profitability of our society from an economic perspective, not an ecological one.

The 'Event' & the 'Symbolic Economy'

To draw a parallel between Galiano's and Morales' essays, I suggest that the buildings of the "symbolic economy" are related to the "architectonic event". Both forms of architecture, in the minds of the authors, are products of the media culture. However, their opinions of these phenomena differ.

In Galiano's search to assign blame for the impermanence of buildings today he initially targets architecture schools and magazines, however he concludes that surpassing either of these institutions is the media culture:

> both [schools and magazines] are caught in the maelstrom of media culture, which has digested and transformed architectural knowledge itself. In its present form words like "durability" have lost their currency. In the fleeting world of images, attention zigs and zags through a huge assortment of fleeting architectural shadows – images on flickering screens or crowded boards, consumed almost as soon as they are conceived.[7]

Morales on the other hand is not searching to assign blame for a lack of contemporary durability, rather he maps out the evolution of our perception towards architecture throughout the twentieth century. He regards the media culture as a definition for what our contemporary culture *is*. Within this media culture he locates the 'architectonic event':

> In a world that increasingly consumes images, in a constantly expanding metropolitan culture, in a universe whose buildings are no more than a few of the infinite number of figurative and informative dwellings that surround us, there nonetheless exists the architectonic event.[8]

Like Morales, Galiano observes that within the media culture "the current mood of architecture favors the artistic"[9] and architects are

3.0
The ‘Event’: Contrast -Value

“Clarifying the relationship between old and new elements became the essence of the task when Shim-Sutcliffe Architects was asked to turn the former Pure Spirits Building at the former Gooderham & Worts Distillery in Toronto into the new 6,000-sq.-ft., multi-level Corkin Shopland Gallery.” - Betty Ann Jordan

Corkin Shopland Gallery
February 2006

Shim-Sutcliffe Architect

Distillery District,
Toronto

3.1
The ‘Event’: Contrast-Value

An excerpt from the plaque in front of the ‘Heritage Building’ reads:

“The facade of the building, as you see it today, was disassembled stone by stone, restored and reconstructed to appear just as it did when it opened in 1845. Its original location at 13-15 Wellington St. was immediately north of where the building sits today.”

BCE Place
October 2005

Bay St. & Front St.,
Toronto

under pressure to produce buildings with "revolutionary agendas", sometimes at the expense of practical concerns. Similarly, Morales' "event" is the creation of something essentially new, but not just new; there must be an *intensity* in order to create shock: "Only the intensity of this shock guarantees the potency of the avant-garde work of art."[10]

Galiano observes the consequence of the 'symbolic economy' in architecture from a perspective of concern for material durability; Morales urges the architect to perceive the value of the "event". Despite the fact that Morales' essay does not focus on material durability, he clearly stipulates, possibly anticipating criticism in this regard, that his advocacy of the "event" is not an approval of ephemeral architecture. A dilemma is apparent here; we have two descriptions of a new type of architecture – both products of a media culture - favouring 'artistic' architecture that finds value in the ability to create shock. One maintains that this is done at the expense of material durability; the other disagrees. According to Galiano, one has to assume that the architect has not yet been able to create a 'durable' "event". While Morales' "event" seems more hopeful, in terms of material durability, it remains elusive in his abstract description. For this reason I speculate on an existing phenomenon that could constitute a durable "event". In taking the liberty of appropriating Riegl's categorization of monuments and valuation I would add a category called 'contrast-value', a speculation on a tangible version of Morales' "event". Age-value combined with newness-value or historical-value combined with newness-value produces contrast-value. Today, contrast-value is manifest in adaptive re-use projects which tend to superimpose distinctively contemporary materials and design overtop and adjacent to existing buildings. In contrast-value we find 'depth' in a recognition of the distinct layers; just as in age value we recognize the passage of time, in contrast value we recognize our present day contribution to the passage of time; we are able to situate ourselves in it. Rather than trying to resolve the conflict that Riegl perceives between age-value and newness value, our contemporary sensibility seems to revel in exploiting their very differences and it is perhaps here that we can create the moments of 'shock' Morales refers to. It is a fleeting type of contemporary permanence – not in the sense of being materially delicate, but in the sense that the shock will not last. Before long, the contrast will wear out and everything will become unified in its historical position.[11]

Places in Motion, Buildings in Motion

> The places of present-day architecture cannot repeat the permanences produced by the force of the Vitruvian *firmitas*. The effects of duration, stability, and defiance of time's passing are now irrelevant.[12]

> Ours is a media culture where distances are reduced to the point of being virtually instantaneous, and where the reproduction of images by mechanisms of every kind has meant that an image is no longer linked to any one place but instead floats unattached across the length and breadth of the planet.[13]

In the above observations Morales shows that 'Vitruvian' permanence remains the dominant definition of architectural permanence in contemporary culture while maintaining that definition is 'irrelevant'. However, he does not negate permanence itself, in terms of material durability as being inapplicable to our culture. The question becomes: does the scope of permanence lie beyond "duration, stability, and defiance of time's passing"?

The 'dynamic' permanence described in the 'concepts' section of this thesis is a vision of a permanence that does lie beyond "duration, stability, and defiance of time's passing". Contemporary innovations such as disassembly design, diversified lifetimes, and re-materialization embody a type of permanence that transcends the fixity of place and yet carries an essential, though flexible, continuity with it. If Vitruvian *firmitas* is a brittle idea in our culture of transience then a supple permanence may find relevance where building parts, at all scales – molecular to structural to entire building sections - may float as our images do, "unattached along the length and breadth of the planet". Ultimately, the continuity of the useful lifespan of energy and matter, despite changing location and function, constitutes the nature of a 'dynamic' permanence.

Though dynamic permanence addresses the survival of material durability in our transient culture, it does not address the problems inherent in such a culture that Morales recognizes as "feelings of profound estrangement", "loneliness", and "isolation". In fact dynamic permanence in isolation may well exacerbate such feelings. If the theory of relativity introduced spacio-temporal relationships in single locations, how will our perception of space be affected by spacio-temporal relationships in multiple locations? Dynamic permanence stretches both time and place; buildings and their components strive to match the pace of our society and in their dynamic endurance the linear measurement of time is lost[14]. Again, we leave the last word to Lucretius who speculates on the relationship between time and the mobility of things:

> Time has no existence of itself, but from things
> there comes the sense of what has happened in the past,
> and what is happening now, and what will follow after,
> A sense of time itself is inconceivable
> apart from the motion of things or their immobility.[15]

Consequences of Hierarchical Permanence

Within the built environment there exist different expectations of permanence for different types of buildings, creating a hierarchy of permanence in the built environment. In his analysis of durability in modern theory, Ford observes a 'divide' between architecture and building. Within the realm of architecture lie 'important' buildings such as monuments and institutions; works of lesser value lie simply within the realm of 'building'. Within this hierarchy follows an expectation that 'architecture' will last longer than 'buildings':

> The idea that *important* buildings should be not only durable but also permanent is so integral with the Western idea of architecture as to escape notice, except by those critical of Western civilization as a whole. In this conventional wisdom, true *architecture*, as opposed to *building*, is the construction of monuments elevated to art, and must be as permanent as the ideas it represents."[16] (my italics)

Weaving together Ford's and Galiano's observations, we can then say that 'buildings' lie in the 'material economy' while 'architecture' lies in the 'symbolic economy'. Galiano's observation of the contemporary partiality of architects towards treating the 'common' building as though it were part of the 'symbolic' rather than the 'material' economy reveals a consequence of such a schism in the expectations of permanence:

> Young architects fascinated by the prospect of stardom try to elevate down-to-earth commissions to the more rarefied tier of the symbolic economy, hoping that client and community will receive their buildings as works of art and ensure their physical survival with money and care. Unfortunately, this rarely happens, and the decay of buildings causes much bitterness and resentment between architect and client.[17]

The danger of both the symbolic economy and the hierarchy of permanence that supports it is that it anticipates a building becoming iconic, with no assurances that this will happen, and as Galiano observes, it rarely does. The symbolic economy relates neither to the intentional monument that Riegl describes, where an integral part of the intentionality comes through material durability, nor the historical or the '*unintentional* monument', where the building is deemed a monument subsequent to its original design. The symbolic economy has found a niche between the intentional and the historical monument. Taking advantage of Ford's Western axiom (important buildings equal permanence), the symbolic economy allows for the endurance of buildings to be gambled with the *intention* (through aesthetics) of them *becoming* important and thereby receiving 'life-support' from the client or the public. In this way durability for *certain* buildings becomes entitled, rather than earned. The consequence of buildings that fail in the symbolic economy, demonstrating 'premature aging', conflict with our basic expectations of a natural order or aging as Riegl notes in his observations on age-value:

3.2
Walnut Hall, (built 1853)
January 2006

Jarvis St. & Shuter St.,
Toronto

> from man we expect *accomplished* artifacts as symbols of a necessary process of human production; on the other hand, from nature acting *over time*, we expect their disintegration as the symbol of an equally necessary passing. We are as disturbed at the sight of *decay* in *newly made artifacts* (premature aging) as we are at the traces of fresh intervention into old artifacts (conspicuous restoration).(my italics)[18]

Yet the hierarchy of durability that Ford observes is natural; there is nothing surprising about the fact that societies will regard certain buildings as being more significant than others and as such will want to preserve some more than others. This is the evolution of the intentional and historical monument that Riegl outlines. What is *unnatural*, Riegl observes above, is bypassing the building's ability to withstand deterioration on its own merits. If hierarchical permanence did not exist, if the expectation of material durability were the same for all types of buildings, the 'symbolic economy' would not exist. The exception is the category of buildings within the symbolic economy that have no interest in permanence: 'revolutionary buildings'. Architects of 'revolutionary buildings' are not trying to elevate "down-to-earth-commissions" nor do they hope the "client and community will ensure their physical survival with money and care". According to the Situationsits, as Galiano observes, "revolutionary buildings were not expected to last, simply to happen…"[19]

Ironically however, as Galiano notes with the Villa Savoye, intentionally temporary revolutionary buildings do, at times, get picked up in the symbolic economy along with the 'unintentional yet hopefully iconic' buildings and become preserved through excessive maintenance and expense. Noteworthy in Galiano's observations and his cause for concern, is the confusion *between* the symbolic and material economies. It is the mixture of blatant and casual indifference to endurance within the symbolic economy that further confuses the material and symbolic economy. The value of material durability is at stake here, according to Galiano: "Durability is desirable for architects and clients, and for society at large, which can ill afford the needless waste of ephemeral buildings."[20]

The architect Louis Kahn's stance on monumentality is an alternative vision to hierarchical permanence. Though his vision deals more with iconography rather than material durability and is therefore beyond the scope of this thesis, the questions it raises in terms of primal versus egotistical meaning are worth further exploration[21]. Similar to Riegl's notion of age value, it opens up the scope of value recognition beyond pre-determined dictums:

> By and large, what Kahn thought to be of primary importance- the past and the innate characteristics of materials, color, water, light, and nature itself – were of secondary importance to his contemporaries, who would probably have demurred at his contention that monumentality in architecture derived from its "spiritual quality," meaning that all architecture was potentially monumental.[22]

3.3
Historical Monument

Colborne Lodge, (built 1837)
January 2006

High Park,
Toronto

3.4
Historical Monument

Flatiron Building, (built 1891)
October 2005

Church St. & Front St.,
Toronto

The Myth of Permanence

> one of the most ancient commonplaces of architecture; buildings persist in time. Yet they do not.[23]

> Is there something inherently flawed in Modern architecture's conception of good building? Is there something inherently flawed in the practices of modern construction?[24]

Ford takes the position that it is in fact our conception of 'good building', inherently related to durability and permanence, that is flawed. Ford writes that our traditional perception of permanence in architecture has lingered while contemporary construction has advanced, and the two no longer relate. In fact the disconnection causes denial, law suits and pre-mature structural decay.

> The vast majority of buildings erected in history are gone, and there is ample evidence that traditional architecture and traditional construction have suffered their share of similar problems.[25]

To deny the necessity of maintenance, which Ford describes as lingering "ideological baggage", is proof that an absolute conception of permanence is dominant at the moment – jeopardizing the realization of relative permanence. If structures are left to exist without maintenance they will not endure for as long as they could in a relative sense.

Within Ford's observation that we have a "deep-seated need to believe in the permanence of traditional buildings, and have developed a tendency to overlook those instances when these works fail to meet our expectations"[26], is proof of our need to believe in absolute permanence and our mechanism for dealing with the 'shortcomings' of relativity is through denial. Interestingly, this desire for absolute permanence that Ford describes as being apparent in contemporary society is a subtle, yet distinct, variation of Riegl's historian's appreciation of "historical monuments". The twentieth century perception of the Parthenon reveals the difference between Riegl's historian and Ford's contemporary public. Both perceive value based on the originality of the monument as an artifact: "the more faithfully a monument's original state is preserved, the greater its historical value: disfiguration and decay detract from it."[27] The difference lies in the reaction to the state of the monument in the present. Ford observes that "the numerous reconstructions of the Parthenon have been universally suppressed by common consent, subject to a kind of collective amnesia in which the modern replacement is treated as the original."[28] While Riegl, at the beginning of the twentieth century, defines the Parthenon's state as a ruin and comments that its state as such "can only be regretted by the historian."[29] The major difference here is between denial and regret. While the historian may regret the altered state of the Parthenon, the contemporary public, according to Ford, prefers to deny that any such alteration has occurred. The development of this collective amnesia towards the reality that our monuments are in fact impermanent, underlines the significance of permanence in our culture. Perhaps this denial is tinged with a sense of desperation, as contemporary culture becomes more transient and, without an

alternative vision of permanence, we feel compelled to depend on the permanence of the past to fulfill our connection with eternity.[30]

Ford examines how the myth of permanence in architecture answers a basic human need:

> We equate architecture with permanence and stability; we equate permanence and stability with mass and solidity; and we have not, as Le Corbusier predicted, come to regard a house with the same attitude with which we regard an automobile or computer. If the idea of obsolescence and routine maintenance is more readily acceptable in the case of the latter, it is perhaps because it plays a smaller role in our sense of well-being.[31]

In the same vein, Rudolph Arnheim justifies the validity of the durability of architecture on a deeply human level: "The building provides shelter and a place for people to do their work and their living. It thereby reaches all the way down to the essential concerns of man."[32] In the end, Ford argues the practices of modern construction are not "inherently flawed"; what is wrong is a misperception that architecture is failing when in reality it is not 'failing' but simply not living up to people's expectations of what it is 'to last'. He feels conventional procedures of bidding and maintenance, and the conventional roles of the architect and contractor are simply not set up to deliver expectations of durability that have reached mythic proportions.

The Present Tense of Permanence

If permanence is thought of as a continuum, from a state of being *most* durable in the present, to *least* durable in the future, then the ultimate state of permanence, in terms of endurance, would be at the *least* durable end of the continuum. The ruin demonstrates this logic as Riegl describes:

> It is probably fair to say that ruins appear more picturesque the more advanced their state of decay: as decay progresses, age-value becomes less extensive, that is to say, evoked less and less by fewer and fewer remains but is therefore all the more intensive in its impact on the beholder. Of course, this process has its limits. When finally nothing remains, then the effect vanishes completely. A shapeless pile of rubble is no longer able to convey age-value…[33]

If permanence is *most* evident at the end of its continuum, the implication is that it is *least* evident at the beginning. The incipient nature of permanence in the 'present', or at the beginning of its continuum, makes it very difficult to identify. Emblems of decay such as rust, cracks, worn patinas, and moss, that mark time's passage, do not exist in new buildings. In a sense, permanence does not exist in the present; only its potential does. The intangible nature of permanence in the present makes it easy in the building process to forget, or fake. Galiano acknowledges this evasion within the profession of architecture:

> while those who commission or inhabit buildings expect architects to tend to the realities of wear-and-tear, they very often receive little more than shadows and (crocodile) tears. Expected to deliver the goods, architects all too often hope to get away with playing god. And so this seems to be what's expected of us in the fini-millenarian symbolic economy: hot images, hot words, hot air.[34]

Ford cites Kahn's Philips Exeter Academy Library as an example of a building with all the 'appearance' of permanence and yet without the material durability. Paradoxically, he uses the 'solidity of a ruin' as a metaphor to describe the library's appearance of strength; paradoxical in the sense that ruins are situated at the least durable end of the continuum of permanence and yet it is, as Riegl describes above, the intensity of age-value that is responsible for this perception of strength and solidity.

> it appears no less solid than a Roman ruin; yet this construction system [concrete floors, columns, and beams, with brick bearing walls eighteen inches thick (in reality they contain a three inch cavity with waterproofing and insulation, covered by a four-inch brick interior facing)] was no guarantee of permanence. In 1990, eighteen years after its completion, a program was begun to retrofit parts of the roof terrace, many of the teak and oak windows, and a substantial portion of the brick exterior wall.[35]

Developing a strategy to identify 'potential' permanence in the present, though challenging, would prove a critical barometer for the fate of material durability.

Contrasting Rudolph Arnheim's defense of durability to

3.5
Inscriptions and foundation dates engraved into buildings evoke a palpable sense of intentional permanence. They represent a conscious desire, in the present, for the building to endure; a date only gains meaning with the passage of time.

Union Station
October 2005

Bay St. & Front St.,
Toronto

3.6
Royal Insurance Co. of Canada
October 2005

Scott St. & Colborne St.,
Toronto

Galiano's example of Jean Nouvel's defense of fragility reveals the radically divergent interpretations of the significance of material durability:

> [Arnheim:] Firmness and solidity are, first of all, a property of the present state of things and serve as the perceptual equivalent of what has value. If I make something of durable material, I express my conviction that the thing is good, often without the rationalization, and therefore I want it to last."[36]

> [Nouvel:] contemporary durability is not to be found in the *firmitas* of construction, but rather in the *venustas* that manages to capture collective imagination: if the building becomes a revered icon, society will ensure its endurance, continuously repairing the ravages of time so that it always appears fresh and newly born."[37]

While the value of material durability remains an ethical debate there is an objective truth in Arnheim's perspective that Nouvel's confirms: durability *is* "a property of the present state of things". In deferring durability to a hypothetical future, material durability is in fact not obtained. The type of endurance that Nouvel refers to is one derived from and dependent on the energy of society rather than from the material itself.

Though Nouvel's stance here essentially expresses a similar idea to the one examined in 'hierarchical permanence', its applicability here lies in its reference to the *appearance* of permanence. Nouvel refers to a relationship where *venustas* contains *firmitas*. However, there is a distinction between permanence inspired by beauty and beauty created by permanence. The first relates to the preservation of a monument, or the maintenance of newness-value or the symbolic economy while the second implies age-value and weathering. Architects Herzog & de Meuron explore a similar relationship as Nouvel between *firmitas* and *venustas*:

> We submit to venustas, not firmitas; it is beauty that enchants us, that makes us curious about life and ourselves, that shakes us up and inspires us…Understood in this way, firmitas wouldn't be a separate category on the same level as venustas but rather a special case, an absolute value that can not be achieved, that will remain a dream and is interesting only as such.[38]

Though Riegl regards newness-value and age-value as being antithetical, this is only if they occur simultaneously. If the one is allowed to grow into the other, the conflict dissipates. I propose the concept of 'weathering' as a bridge that allows a graceful transition between newness-value and age-value.

In their book *On Weathering* David Leatherbarrow and Moshen Mostafavi discuss the concept of weathering in architecture. The distinction that I observe between weathering and age-value is in terms of intentionality; weathering anticipates the effects of aging and therefore has the potential to incorporate these anticipated effects into the design, while age-value, on its own, is simply a recognition of an effect produced without pre-meditation. The anticipation, intentional denial, or neglect of the effect of time's passing can be perceived in the materials chosen. Leatherbarrow & Mostafavi describe the weathering process as adding to a building, even though physically it is a process

of ‘subtraction’. The authors note the modern movement’s choice of materials represents a disavowal of weathering, desiring instead a perpetually pure appearance of ‘newness’ (often in white purity). The selection of materials that deny the passage of time, but succumb to it, represents a conscious indifference to the existence of time, its passing, and its affect on the building: “Weathering as deterioration has often been associated with modern architecture.”[39] Weathering, having learned from age-value can craft the aesthetics of permanence as it runs through the continuum from newness-value to age-value to dissolution and decay.

Notes

[1] Arrhenius, Thordis, “The Fragile Monument; On Riegl’s Modern Cult of Monuments”, p.3 <http://www.aho.no/Forskerutdanning/Konferanse/Papers/Arrhenius.doc>
[2] Galiano, “Architecture and the Symbolic Economy”, p.46
[3] Huxtable, Ada Louise, *Goodbye History, Hello Hamburger: An Anthology of Architectural Delights and Disasters*, p.85
[4] Reyner Banham, *The Architecture of the Well Tempered Environment,*p.20-21
[5] Vitruvius, *The Ten Books on Architecture*, Book II, Chap.8.8
[6] Marx, “Capital”, Chapter 1, from Marshall Berman, ‘*All that is Solid Melts into Air*’, p.99
[7] Fernández-Galiano, Luis, “Architecture and the Symbolic Economy”, p.44
[8] Sola-Morales, Ignasi, *Differences*, “Place: Permanence or Production”, p.102
[9] Fernández-Galiano, Luis, “Architecture and the Symbolic Economy”, p.44
[10] Sola-Morales, Ignasi, *Differences*, “Place: Permanence or Production”, p.103
[11] In a separate essay entitled “Weak Architecture”, Morales speaks of superimposition; in this too I see contrast-value: “In effect, the experience of certain recent architecture is the experience of superimposition. The signified is not constructed by means of an order but by means of pieces that may ultimately touch; that approach one another, at times without touching; that draw nearer to one another yet never make contact; that overlap, that offer themselves in a discontinuity in time whose reading as juxtaposition is the closest approximation to reality at our disposal.” – Morales, Differneces, “Weak Architecture”, p.66
[12] Morales, *Differneces*, “Place: Permanence or Production”, p.102-103, Though outside the scope of the thesis, Morales also rejects genius loci as being feasible today: “The idea of place as the cultivation and maintenance of the essential and the profound, of a genius loci, is no longer credible in an age of agnosticism; it becomes reactionary.”p.103
[13] Ibid, p.99
[14] Though beyond the scope of this thesis, Leatherbarrow and Mostafavi contemplate further consequences to ‘buildings in motion’ in terms of pre-fabrication leading to a neglect of the specific nature of particular sites in terms of climatic conditions: “Architecture made up of a “kit of parts” changed the relationship between a building and its potential site, allowing assembly and construction to take place on any site, to a great degree independent of its local environmental and climatic conditions – which paradoxically makes it siteless. The variations in the weather and hence in weathering, which can be anticipated in any location, cannot be reconciled with this manner of practice. Older architectures also composed elements shaped after preexisting forms; what is unique in modern practice is the proportion of elements of this kind, and the corresponding reduction of elements that allow pregiven forms to be reconciled with a given location. This practice, among other things, has motivated much criticism in recent years, an example of which is Aldo Rossi’s argument on the making of a site through the introduction of pregiven forms. This results, Rossi argues, in the remaking of the site, designated by the term locus.” – *On Weathering*, p.29
[15] Lucretius, *De Rerum Natura*, p.14
[16] Ford, Edward, “The Theory and Practice of Impermanence: The Illusion of Durability”, p.3
[17] Fernández-Galiano, Luis, “Architecture and the Symbolic Economy”, p.46
[18] Riegl, “The Modern Cult of Monuments: Its Character and Its Origin”, *Oppositions*, no.25 (Fall), p.32
[19] Fernández-Galiano, Luis, “Architecture and the Symbolic Economy”, p.44

[20] Fernández-Galiano, Luis, "Architecture and the Symbolic Economy", p.46

[21] Kahn states that "monumentality is enigmatic. It cannot be intentionally created.": Twombly, Robert, Louis Kahn: essential texts, p.22

[22] Twombly, Robert, *Louis Kahn: essential texts*, p. 10

[23] Leatherbarrow & Mostafavi, *On Weathering*, p.5

[24] Ford, Edward, "The Theory and Practice of Impermanence: The Illusion of Durability", p.1

[25] Ford, Edward, "The Theory and Practice of Impermanence: The Illusion of Durability", p.2

[26] Ford, Edward, "The Theory and Practice of Impermanence: The Illusion of Durability", p.2

[27] Riegl, "The Modern Cult of Monuments: Its Character and Its Origin", *Oppositions*, no.25 (Fall), p.34

[28] Ford, Edward, "The Theory and Practice of Impermanence: The Illusion of Durability", p.3

[29] Riegl, "The Modern Cult of Monuments: Its Character and Its Origin", *Oppositions*, no.25 (Fall), p.34

[30] The history of the Pantheno's inscription conveys a similar desire to suppress alterations or reconstructions. The Pantheon, originally built in 27-25 BC by Marcus Agrippa, had the following inscription engraved onto its frieze: 'Marcus Agrippa, Consul for the third time, built this.' Following the destruction of Agrippa's Pantheon in 80 AD by fire Hadrian reconstructed it in 125 AD, however he chose to inscribe the frieze with the original inscription giving credit to Agrippa. This act demonstrates the type of mythical permanence that architecture is capable of conveying. <http://en.wikipedia.org/wiki/Pantheon%2C_Rome>

[31] Ford, Edward, "The Theory and Practice of Impermanence: The Illusion of Durability", p.5

[32] Arnheim, Rudolph, "Thoughts on Durability", *p.49*

[33] Riegl, "The Modern Cult of Monuments: Its Character and Its Origin", *Oppositions*, no.25 (Fall), p.33

[34] Fernández-Galiano, Luis, "Architecture and the Symbolic Economy", p.44

[35] Ford, "The Theory and Practice of Impermanence: The Illusion of Durability", p.6

[36] Arnheim, Rudolf, "Thoughts on Durability", p.48

[37] Fernández-Galiano, Luis, "Architecture and the Symbolic Economy", p.44

[38] Herzog & de Meuron, *Herzog & de Meuron 1978-2002*, "Firmitas", p. 120

[39] Mostafavi, Mohsen, and David Leatherbarrow, *On weathering : The life of buildings in time*, p.16

3.7
A lingering bridge support
November 2005

Grand River
Cambridge, Ont.

Conclusion

What is it to last? What is it to last relatively versus absolutely? Is absolute endurance possible in an age of relativity? From a relative perspective, the absolute endurance of substantive matter in the material world is an impossibility. And yet, it is the flicker of uncertainty in casting such a proposition as illogical that reminds us of our unwillingness to forsake our tenuous connection with the idea of earthly immortality. In addition, the question, 'what is to last' in a relative sense, in a relative culture, inspires numerous possibilities.

If Vitruvian *firmitas* is not looked upon as the definitive source of permanence, but rather one particular type of permanence, its message of material durability can remain relevant to our society. It is important that the concept of permanence stand on its own, separate from Vitruvian *firmitas*; permanence should include *firmitas*, rather than *firmitas* being permanence. Permanence does not have to contradict the realities of time – in fact it can be the exact opposite, accepting and being attuned to time's passing, recognizing and celebrating its effects. As a contemporary concept it needs to stand on its own in properly understood terms that will foster its usefulness in our culture. The autonomy of permanence will mitigate anachronistic expectations as well as broad rejections of the concept due to its historical associations. The issues raised by my gallery of authors highlight both the means to position permanence as a contemporary concept as well as some risks involved in this integration.

Riegl increases the scope of what constitutes a monument. He broadens the definition from the traditional 'intentional' monument to the development of the 'historical' monument and finally to the modern appreciation of 'age-value'. Particularly with his 'age-value' category, he not only increases the number of buildings that would be considered 'monuments' but he also extends the appreciation of monuments beyond recognition dependent on education. Extending the association of permanence from the exclusive domain of 'important' buildings to that of the 'everyday' building - from a few large moments to many smaller ones - furthers the concept's integration and accessibility in our culture. Associating value to the perception of the passage of time, through visible signs of wear and decay in the built environment, is a pivotal quality related to the overall promotion of permanence in architecture. For Riegl, the question of use divided newness-value from age-value: functionality took precedence over the perception of the passage of time. However, it is possible to combine newness-value with age-value today through integration rather than a successive approach, allowing both functionality and a perception of time's passing to occur simultaneously. Adaptive re-use projects allow for such an integration where age-value, expressed in the core building, or in 'functionless' objects, complement and enrich the environment alongside 'new' interventions – either contemporary, re-used, or re-materialized elements.

Ford observes the modern belief that traditional buildings are more permanent than contemporary ones is an illusion. He outlines how this illusion involves a belief that architecture, especially 'important' architecture, is self-sufficiently permanent. Ironically, he reveals how this nostalgia for a lost permanence of the past is in

fact hindering material durability in the present. He explains how expectations that modern architecture should be as 'permanent' as the past, a past that is perceived to have been self-sufficiently permanent, relegates the importance and necessity of routine maintenance. He notes that as modern construction has become more complex, in terms of the increased number of parts and joints, the need for continual maintenance is even more crucial today than it was in the past if material durability is to be achieved. The idea that buildings require routine maintenance might become more palatable if it is thought of in terms of dynamic permanence and nature's own natural cycles of decay and re-birth. The symbolic role of the monument, as a connection with the eternal, must be reconciled with its material limits as a mortal creation. A belief in absolute permanence can carry on - beyond the dissolution of the material itself – through one's memory, through media, or through re-construction. If our mythical expectations of endurance continue to inspire a denial of maintenance, capitalism, thirsty for high turnover rates, will continue to take advantage of pre-mature deterioration.

Galiano identifies the existence of two economies that govern contemporary architecture: the symbolic and the material economy. The media culture's generative influence in the production of buildings with "artistic" interest and "revolutionary agendas" fosters the symbolic economy, where these artistic interests outweigh 'practical' concerns over material durability. The material economy, on the other hand, is one where the endurance of a building depends on 'practical' concerns such as the initial quality of design and construction. Galiano observes that the lack of concern over material durability in the symbolic economy, made feasible by deferring such concerns to wealthy clients or the public trust, is influencing a similar attitude in the material economy where such financing is unavailable. The promotion of material durability, in a culture that from an economic perspective devalues it, requires an even greater need to articulate and identify its significance than a concept that fits easily within its principles. Galiano's observations point to the consequences of a lack of articulation resulting in a schism of economies, jeopardizing material durability. Galiano's observations prompt questioning into how the creation and preservation of culturally significant icons in an appearance of 'newness' can occur without generating a passivity with respect to the demands required for a building to endure based on its own material strength with reasonable maintenance.

Morales observes that in our media culture, time is unhindered by distance through the digital transmission of images no longer rooted to specific places. In this way, he observes that we are no longer a culture that defies the passage of time. Since the defiance of time's passing used to be integral to the creation of place, as in Vitruvian permanence, he regards the production of such places today to be irrelevant. In this rejection however he opens a new range of potential contemporary permanence through his concept of the "event". The "event" offers the hope of creating meaningful places amidst chaos. The shock the "event" produces is essential to its meaningfulness and integration in our contemporary culture. Morales stipulates that despite the intense shock that the "event" seeks to produce, such an

architecture does not imply material fragility or temporality. Given this combination of shocking yet enduring architecture I offer contrast-value as an interpretation of Morales' "event" and a continuation of Riegl's age-value. The juxtaposition of contemporary design against components displaying signs of aging or historical significance, generates shock in the striking contrast of material types and age. In addition, it generates meaning out of our own present day contributions, rather than relying solely on those of the past.

As humans are complex beings requiring more than logic to fulfill their needs, I suggest the entire continuum of permanence be embraced – albeit with a clear understanding of the implications that its different variations offer. It is through the polarization of permanence, from abstract to relative and dynamic to static, that I would renew its value and broaden its applicability in our contemporary culture of flux. Revealing the concept's variety of modes and realms demonstrates its flexible nature; an essential quality necessary to its successful integration into our culture. A corresponding awareness of the consequences of considering any one aspect in isolation from the continuum as a totality is also important. Considered in isolation each component presents deficiencies: relative permanence lacks an intimation or connection with the eternal and with myth; absolute permanence denies the necessity of maintenance and remains disconnected with the substantive world; dynamic permanence risks a loss of the perception of time's passing; static permanence risks being overtaken by land value. However, as a comprehensive continuum they both propel and compliment each other.

The intrinsic qualities of permanence have the potential to alleviate the loneliness and isolation that Morales refers to as being symptomatic in our "ubiquitous" "global village". Buildings that mark the passage of time offer stability, continuity, a connection with the past, a mnemonic aid, and didactic tools by which the contemporary individual can ground him or herself. Recognizing the concept's usefulness beyond a purely material perspective provides a foothold that grounds modern culture amidst the upheaval. These grounding qualities, however, are only manifest in works of static permanence and only certain forms of dynamic permanence. This again raises the importance that the entire continuum of permanence should be promoted, as not all types will serve every purpose. The imperceptible nature of rematerialization for instance, would do little to assuage feelings of loneliness and isolation, however it would contribute a great deal towards ecological sustainability. Further research into the psychological impact of permanence in our built environment both in a phenomenological sense and in terms of its mythical associations would further clarify the concept's potential value. Within this debate an elaboration of my initial questioning into the significance of a material durability that lies outside our perception would also be applicable.

In a culture of flux is it possible for a certain degree of coherence to be maintained? It is a question of how multiple, simultaneous situations of flux can contribute elements of coherence to each other; the dismantled parts of one site become the elements for the assembly of another. In this process, stability is the product of instability. The dismantled components from one site may in fact

contribute the necessary elements for another to maintain its integrity of place. As well, the realization that change can and does occur in single locations – cycles can revolve around consistent points – positions static permanence as being applicable in situations of flux. The ability of materials to maintain coherence in response to nature's own dynamic cycles through age-value suggests that they have the ability to do likewise in response to the turmoil generated by a transient society. Though it may become obsolete, material form can maintain value – both in situ or through dispersion, providing contrast-value in either case.

This thesis advocates a practice; that of promoting the concept of permanence. The promotion of permanence was inspired by a concern over rising construction and demolition waste and its damaging effect on our environment. What this thesis has begun, through promoting and clarifying permanence as a contemporary concept, is the necessary groundwork for practical strategies to follow. In forming sustainability strategies that address how to reduce the disposability of architecture difficult questions must be addressed. How can the inherent strength of materials have a direct relationship with their endurance in a capitalist society? How can the ethos of ecological sustainability, in terms of 'treading lightly' on the earth, support the ethos of permanence, in terms of extending the useful lifespan of the massive quantities of resources which our economy drives us to extract from the earth? What role should the profession of architecture take in the promotion of material endurance within the context of our environmental crisis? Given the architect's unique capacity to conceive of permanence in the present, I believe the profession has incredible potential to mediate the use of our natural resources within the bounds of sustainability. If permanence in pre-technological societies was a struggle *against* nature, today it is a struggle for the preservation *of* nature.

3.8
Traces of the piston wheel that once operated the boiler - now enclosed in a stairwell for offices occupying the building

Stone Distillery Building
February 2006

ERA Architects

Distillery District,
Toronto

3.9
Traces of patterning from a previous application remain visible on a ceiling.

401 Richmond
February 2006

Spadina Ave. & Richmond St., Toronto

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