

TRANSFORMATION OF HISTORIC BUILDINGS: A STUDY OF ARCHITECTURAL DETAILS AS REPRESENTATIONS OF CONSTRUCTION AND MEANING

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Abstract:

Generally, building details are understood as constructional representations, thus referring to their materials, joints and systems. But clever architectural detailing is often embedded with semantic meanings - in addition to constructional objectives - especially with respect to the building's 'part to whole' inter-relationship between its systems of construction, its compositional vocabulary, and its thematic investigations. Therefore details - as both 'representations of meaning' and as 'representations of construction' - hold a greater responsibility in transmitting the building's character, value and performance.

This research is a critical examination on subversive changes that regularly happens to original detail representations when historic buildings are transformed into modern programs. Both the notion and tectonics of 'architectural details' are re-read through the research, framing its inquiry on the hypothesis that the conservation – and the subsequent transformation – of a building may consist neither the original nor the modern detail: it is often a hybridization of both historical and modern ideas. To evaluate this hypothesis - and to verify subsequent representational changes of architectural details - a research framework is outlined, a theoretical position is arrived at, and three recent Sri Lankan experiences of the conservation and re-use of historical buildings are assessed.

The study concludes that the building detail transformation in the selected case study scenarios is a failure from an architectural point of view, as there is very little intellectual understanding behind the process. Subsequently, the research brings out the poor architectural intervention within such building transformation processes, and argues that more desirable techniques were not adequately explored, either by design or by default. This research therefore, is an effort to reverse the current approach to re-designing the re-use of historic buildings, and aims to project an alternative discourse on architectural details and detailing in such context.

Keywords: *details, historic building transformation, detail hybridization, meaning representation, construction representation*

1.0 Introduction: The transformation process

Building is not merely a singular artefact: it is a unified articulation among several parts. That part-to-part, part-to-whole and whole-to-part interrelationship makes a building both useable and workable. This larger perception of ‘part-whole articulation’ - if connotes in to general architectural terms - can simply be termed as the process of ‘detailing’. Accordingly, ‘detailing’ is the driving force behind a building’s distinctiveness and performance. The readers’ and users’ understanding of a building depend on what details demonstrate on its system of construction and meanings of aesthetics.

Depending on the way it details, each and every building has a character or representation of its own. Building and this original representations seem to stand forever, thus we contemplate them as enduring absolutes. But the reality is that they change rapidly with time, and even become obsolete for usage. Some of such buildings are renovated, conserved and re-established as time-tested entities, depending on their flexibility and adaptability. New building details emerge as the subsequent result, even disregarding the original representations.

Indeed, the subsequent results are neither new nor old, yet something immanence. Such correspondence occurrences – which mediates between the binaries of ‘new’ and ‘old’ - can be connoted as ‘hybridizations’. The hybridized details could still respond to the parental characteristics, having tension with both old and contemporary characteristics or even by creating a totally spontaneous intervention. However, in order to incorporate such intellectual and pragmatic positions of detaining in to specific building interventions - such as the transformation of an old building into a modern program - new paradigms of architectural thinking must be pursued both in academia as well as in practice. More specifically, an intellectual dimension of building must be bought into our analysis of such construction-specific situations.

2.0 Architectural Detail and The notion of 'Hybridization'

According to Louis Khan, “architecture is the thoughtful making of spaces”. Notwithstanding, this research looked at a building with a greater perception; beyond spatial planning as well as the mere aesthetics. The broader argument here is that the ‘making of space’ requires the ‘making of building systems’ that defines that space, and the ‘making of building systems’ has all to do with how those systems and parts are joined and detailed. Following Edward Ford’s

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(2011) interpretation of an ‘architectural detail’, this research infers buildings as both a pragmatic construction and a symbolic abstraction, in order to build up a research position. *“Abstraction is necessary distancing mechanism in any art - a formal arrangement, a plot device, or an idealized shape - to make the fragments of the world, physical or otherwise, into art.Animation - abstraction’s opposite - is no less necessary, and if abstraction is about understanding a building, animation is about feeling it”* (Ford, 2011).

The research moves from the position that the notion of an ‘architectural detail’ must be defined within an advanced intellectual paradigm, as opposed to the standard conventional definitions based on its performances (structural, aesthetical and environmental). In such thinking, Ford’s interpretation of a detail as five possible representations - as abstract, as motif, as order, as joint and as autonomous design - develops a better dialog within detail itself, with detail and building, and between the building and its spectators; each of these five definitions of details holds either meaning representations or construction representations. The various applications of these five definitions in the building transformation process can evoke one of three ideas of hybridization: Displacement, Reaction and Fusion. These three possible outcomes of hybridization were adduced from what Nathanssue (2012) has researched and stated.

The following table depicts the study-specific definitions alluded for the five dimensions of the idea of ‘details’ and three dimensions of the idea of ‘hybridization’.

The idea of Architectural Detail	as Abstract	Detail depicts concepts more as a metaphor and symbolic approach than direct express.(not exposing but non exposing detail)
	as Motif	Direct representation of aesthetic over every other image of detailing.(decorations which gives aesthetic appreciation)
	as Order	An external depiction of what is inside as the structure. It is a system of construction; but non-structural. It is a system of ornamentation; but not to be confused with decorations.

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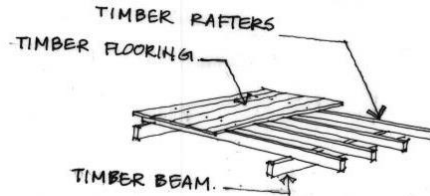
	as Joint	These details are to relate one part of a building to another with the purpose of making it a whole
	as Autonomous Design	This detail is contrasting to the other building whole. Look different and do not fit at all. It is highlighted.
The idea of Hybridization	as Displacement	One idea dislocates the other so that the two co-exist in tension
	as Reaction	The two ideas respond to each other and a symbolic relationship emerges
	as Fusion	The two ideas merge so completely to get results as an entirely new idea, with different characteristics from either of its parent ideas

3.0 Constructional representation of the detail

The study delineated a subtle and elusive understanding of the ‘representation’ of details in the selected ‘transformed’ buildings with respect to ‘then and now’. It identified that the contemporary interference of architectural detail in the process of transforming a historic building into a new program has resulted in representational changes. Four specific - but interconnected - theoretical observations have been identified with regard to how architectural details in such building interventions represent their constructional virtues.

The first observation is that - prior to the respective ‘transformation’ processes - most building details had represented constructional virtues than symbolic meanings. The original timber floor detail at Galle Dutch hospital, for example, has been conceived to resolve a pragmatic constructional requirement of how to support the suspended floor slab at the first floor level. The detail itself is a collection of several wooden parts, and their precise articulation acts as a unified whole; the three layers of timber beams, rafters and paneling form an order that represents the structural logic. The specific connections between timber layers - as well as their association to the wall - form ‘joints’ that make possible the assemblage of the entire organism.

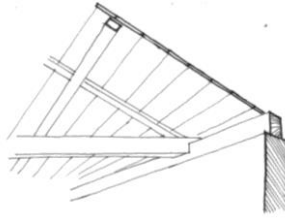
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Early construction means of detail

Source: by author

At the Galle Dutch hospital, a range of timber trusses accommodates the roof along the span of walls, supporting the roof structure and subsequently transferring loads to the perimeter walls.



Early construction means of detail

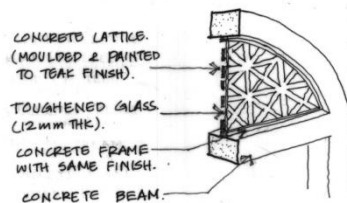
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As with the previous example, the primary objective of this detail is indeed constructional: a 'truss' as a collection of timber parts jointing each other and 'a range of trusses' forming the presence of an order represent the constructional logics of the building. These examples reveal situations where details have been devised as an order and as a joint, to articulate parts to parts, and parts to whole; this particular construction idea is predominantly represented through the detail itself.

Secondly, during the building 'transformation' process, the original constructional representation tends to be suppressed, concealed or eliminated, subsequently being overlaid by meaning-specific representations, thereby distracting the original construction-specific representations of detailing. In most cases, even though the original construction representation is preserved, they are made to be mute or in tension with a new representation.

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The door frame and grill work in Colombo Race course building has been originally done in timber, with their wooden parts and joints representing the pragmatics of construction. Linear timber members that form the trellis-like structure are carefully laid diagonally over each other, forming both ‘an order’ and ‘joints’ that solely represent the respective constructional intelligence. In the ‘reuse’ process, the entire grill work has been removed and replaced with a concrete molding, and colored to resemble a teak stain finish of a timber panel. By doing so, the embedded purity of the original constructional representation has been completely destroyed; there are neither ‘joints’ nor forming of an ‘order’, while the sizes of the diagonal members are also different because the concrete molding cannot achieve the same slenderness as that of a timber section. If one considers the logics of construction, having a concrete molding within a timber framed architrave also brings into question the entire rationale of the new detail; it is simply a motif, which accommodates a mere compositional aspiration.

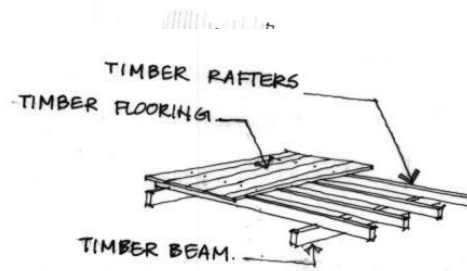


Concealed construction representation of detail

Source: by author

Roof detailing above the atrium in the Independence Arcade is another example to show that the original constructional representation is suppressed and made to exist in tension with new meaning-specific representations. The original detail had several rafters and reepers articulating at one point, supporting not a joist, but a huge truss. Clay tiles were placed over that structure, and hence the detail was originally a comprehensive hipped roof structure at that point. It could identify as an order and as a joint which represented the constructional logics needed to resolve original constructional situation. In the transformation process, it has been refurbished and added certain opposing values, but keeping some of the original constructional representation intact. The additional glass and aluminum exaggerate the detail more as an autonomous design, thus allowing constructional representation to remain suppressed. Hence in this situation, the detail has its own dual representations of meaning and construction; yet the original idea of representation was not acknowledged or realized to give priority. A subversive approach to detail has muted its original constructional representation.

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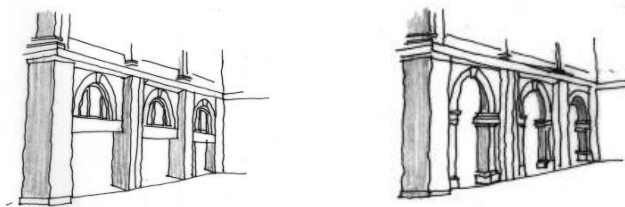


Subversive construction means of detail
 Source: by author

Thirdly, even though the original constructions had accommodated parts-to-whole relationship, the new details have failed to respect such sense of totality in constructional representation. In other words, the 'new' has not allowed the original representation to be enhanced by its subsequent detailing.

Same example used above can be used to explain this particular idea as well, where the present expression of the detail is totally different from what was embedded originally. Even though the old building stood as a collective of parts by letting its construction details to be elicited, the new detail gives the impression that it did not precisely understand the original representational objectives. That is why such an explicated constructional detail was ornamented and given different perceptions. The future observers can be easily misguided by these new (and undisciplined) representations as they would read the total building detail without a coherent meaning, but with a fragmented understanding.

Column arch structure detail of colonnaded front façade of Colombo Race course building is another example where the original representation has been unwisely disturbed. Originally, this particular set of the arches were different from the others and represented the building's load bearing system and joints. It clearly could be identified as a constructional representation that contributed to the load-transferring function of the building, yet opposing the aesthetic continuity of the façade's repetitiveness. In the reuse process, that detail was not understood as a constructional mean, but only as a fragmentation to the repetition of the façade. Subsequently, what was deemed as lacking in the aesthetics was treated to restore, but the need of preserving the embedded constructional representation was left behind.



Transformation of detail

Source: by author

Fourthly, there is also a risk in the possible misrepresentation of the construction details in transformed building. This brings up the challenge of using building parts and mechanisms to satisfy the needs for adaptability or flexibility of buildings without suppressing the original representations or generating viable alternatives instead.

Ford (2011) describes the term ‘construction’ to acknowledge its contribution to a building in two ways: “*as an assembly or as a totality, as a set of parts in a discreet relationship or as a unified organic continuum. We demand not just completeness, but permanence*” (Ford, 2011, p. 227). This idea is a validation to the utterance of construction details, which is to convey a major role in the part-to-whole relationship of a building. Indeed, our understanding of a building - not as parts, but as a whole – depends on the ability of constructional detailing to appear in co-existence. “*We must understand it (construction) as an assembly, as co-dependent parts, as elements in equilibrium, as configuration that has been constructed....*” (Ford, 2011, p. 227). If the building represents construction, then our reading towards it needs to be developed accordingly by responding to the original situation. Elimination, concealment or suppression of construction representation make our understanding of the buildings blunt and weak, and does not direct towards a new understanding based on either of the meanings. It is like you wearing a baggy outfit. Once worn, it may look nice; but there is no explanation or critical relationship to your body’s system of parts, joints, mechanism, flexibility, layers or shape.

4.0 Semantic representation of the detail

Similar observations can be delineated with regard to how architectural details in selected case study buildings represent their semantic interpretations.

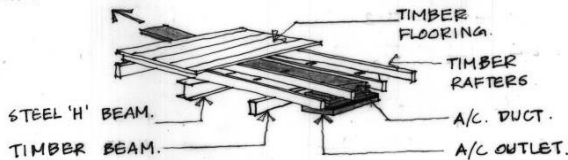
It can be observed that, when original construction representations were transformed into semantic representations in new buildings, they positively or negatively suppress the older representations, thus making the building more of an ‘artifact’ than an ‘agglomeration of parts’. Even though this research does

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not argue whether this is good or bad, it will nonetheless take the position that buildings should not compromise their ability to function - and be represented - in totality.

Firstly, with these buildings originally being utilitarian buildings, their predominant representation has not been meaning-specific. But detailing during the transformation process has seemingly attempted to bring out that semantic representation which was concealed before.

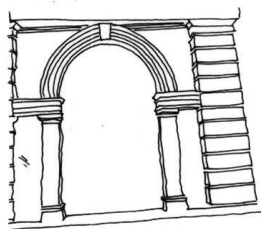
The second floor timber deck detail of Galle Dutch hospital was originally a structural element, which merely had a constructional meaning. But the timber-cladded service duct (which was supposed to suppress within the deck), together with the deck detail, demonstrates a more symbolic representation which wasn't there earlier.



New meaning representation of detail

Source: by author

The original representation of the side façade wall detail of Colombo Race course was also meaning-specific, yet demonstrated a disciplined, harmonious implication to the whole building. In the reusing activities, it has been decided to remove the wall at either side of the arch and replace it with glass. By doing so, the detail seemingly terminates abruptly in a subversive manner, thus transforming a 'motif' into an autonomous design.



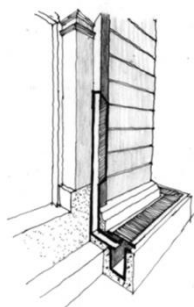
New meaning representation of detail

Source: by author

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The second observation with respect to meaning representations in the case-study buildings is a kind of opposite to the first. It concerns with the fact that the explicit new idea of a detail often proves to be in contrast - or abstract - instead of preserving, transforming, or extracting the original semantic representation. Although the genuine purpose of the abstract detail is to suppress itself and impress old, it has not been a complete success because the semantic representation here has become a byproduct of the combination of both old and new.

In the downpipe details of the Independence Arcade the idea seems to be to hide the services within the motif wall. Otherwise it would have been a subversive implementation. Even though the suppression of 'the new' was expected accordingly, the aluminum downpipe itself acts with an opposite sense to suppress 'the old' as well. In the end, the duct is an abstraction which misrepresents its identity. By being so, the new semantic representation to the building façade has made to be of dual meaning: a combination of a 'motif' wall and an 'abstract' duct.



New meaning representation of detail

Source: by author

In the timber floor detail of Galle Dutch hospital the effort was to preserve the original representation. It does not furnish a successful attempt and a semantic representation has emerged as a byproduct of that effort. Replacing steel 'H' beam is a subversive activity, but it was done to enhance 'the old'. Finally both the 'construction-specific' historic detail and the modern 'autonomous' design detail simultaneously represent both its construction and meaning. Meaning representation is being supported by both old and new parts in the end.

Thirdly, new details as autonomous design support the genuine requirement of overstating the original semantic representations of old details. But those design implementations are usually not strong enough to make the original

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withstand. They often fail to act as an exceptional subversive activity that lets the 'old' to maintain its original meaning further.

The roof detailing above the atrium in the Independence Arcade is such an autonomous design, which is subversively placed as not to interrupt the reading of original details. It let old parts to be themselves, and represent the semantic representation of the existed. But, since the detail is not completely new and subversive, the distinction of new meaning from old is hard to define.

It can be argued that a 'semantic representation' is the personal perception of reading a building/detail, whereas 'constructional representation' suggests a common universal way to read a building/detail. According to Ford (2011) it (semantic representation) is an "art of optics" which vary from one to another, yet something mutual at the end.

The comprehensive and generic idea of semantic representation simply relates to the symbolic expression. Coomaraswamy (as cited in Ford, 2011) opposes the idea of symbolic and iconographic art of western tradition by saying, "*in this kind of art no distinction is felt between what a thing 'is' and what it 'signifies'*". Meanwhile, the semantic representation of contemporary details was discussed in general perception by saying, "*most of these narratives are simplifications of reality*". Many are exaggerations, and some completely contradict the structural or constructional reality of the building (Ford, 2011, p. 295). In the local context, these Colonial building's semantic representation is a confusion fallen in between Ford's general, yet universal refinement and Coomaraswamy's philosophical perspective.

5.0 Three forms of hybridization

Results of hybridization with special references to case-study buildings explicit a lot regarding what has happened at present during the transformation of historic buildings to modern programmes. The cases state that only few outcomes have emerged in spite of many other possibilities of hybridization.

'Displacement' is a common outcome in case study buildings, and appears in four times out of nine circumstances. Door frame and Grill detail of Colombo Race Course building explicit how the displacement happens by co-existing two different ideas in tension. In the façade and downpipes detail of the Independence Arcade building, an old motif detail is transformed in to an abstract detail; however, the first idea is not totally eliminated, nevertheless have been dislocated by the new idea. As such, the two ideas co-exist in tension.

‘Reaction’ is also relatively common in the contemporary applications of detailing in conservation buildings. It appears in three times out of nine results in the case study analysis. For example, the Column-arch structure of Colombo Race course and the timber floor detail of Galle Dutch hospital are hybrid ‘reactions’ where the old and new ideas respond to each other; the new representation is a symbolic relationship of both old and new.

‘Fusion’ has the least amount of application out of the selected details analysed for case-study investigation; it has been observed two times only. Roof detailing above the atrium of Arcade is one such cases to be identified as hybrid ‘fusion’ (this too is not a clear allegory; but tendency is more towards fusion). The two ideas merge so completely and results in an entirely new idea, with different characteristics from either of its parent ideas.

6.0 Towards a better understanding of the building transformation process

Indirectly, details can be referred to as true architectural representatives of buildings. The research could clarify that – during its transformation process – a building is treated, preserved or transformed only depending on how it was understood by the specific design team. Indeed, such understanding of a historic building seemingly lacks capability to comprehend the building’s constructional mechanism or organism (beyond the mere aesthetics).

With historic buildings, there seems to be a rooted approach to read them more through their semantic representations, and less through their constructional representations. What most re-designers do is to mute the pure constructional representations of historic buildings and overstate the meaning representations, thus resulting in hybrid ‘reaction’ or ‘displacement’ details – either consciously or unconsciously. Fusion - as a hybrid outcome - is paid lesser interest, as re-designers are seemingly reluctant to implement a subversive activity within a historic context.

According to Ford (2011), a clever architectural detailing is always being done with a purpose behind elimination or exaggeration. But modern architectural detailing is understood by the majority only as elimination of unnecessary and necessary small scaled building elements. But either it is elimination or exaggeration of details, they all need to have fair justifications to do so. As Ford states, eliminating or suppressing the details is like removing the evidence that was there to prove the weight, assembly of parts, resist for the weather, and functional requirements of a building. Instead, the building would be a weightless, immaterial, solid bulk then, but may not practically work properly. This research argues that – during the conservation/transformation process –

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building details that do not mute their explication are essential to transmit the embedded idea of the original building.

Reading the buildings correctly, understanding their traditional representations and transforming them with the original idea preserved must indeed be pursued for better building conservation projects. Building expressions would be more preserved - and would acquire more value - if the re-formation solutions emerge not by default, but by design. Depending on the findings of the case study analysis, it is able to postulate that the design actions so far have been nothing but default solutions.

Even though 'displacement' and 'reaction' respond to original parental characteristics of details, they rarely carry the virtues of the original detail meant to be preserved. This research suggests taking a turn and paying more attention towards 'fusion' as a hybridization strategy in detailing buildings, which seek to be transformed from old to new. Fusion is a result of modern abstractions or subversive activities. Accordingly, the research suggests the possibility of using an opposing factor (subversive action) to preserve the tradition. Those autonomous designs on one hand proceeds the transformation, and on the other hand grasp the individual attention. That would allow for the emerged detail to separate old and new clearly as they will be independent from the way they possess their constructional and semantic objectives.

The main reason for new building details to present isolated 'patching-up' solutions - than evaluating such detailing as a substantial part of the building whole - is that the most detail solutions are derived not by design but by default. This research calls for the need to reverse that approach and affirm to read buildings with a broader understanding of what they demonstrate, both constructional-wise and semantically. The study believes that imparting such approaches and attitudes to detailing is only possible if a proper dialog about the building conservation/transformation process is generated both in academia and practice.

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