

## Reading the Pym Extension

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*John Smylie, architect and member of INTBAU Ireland, takes a brief look back at one of Northern Ireland's best known Modern Movement works: the 'Brutalist' extension (by Francis Pym, completed in 1972) to the neo-classical Ulster Museum in Belfast, and finds a project that has its strengths and weaknesses.*



*View of the Pym extension from the Botanic Gardens*

In his 2007 television documentary series "How We Built Britain", David Dimbleby described the aesthetic quality of the new Scottish Parliament Building in Edinburgh as less attractive externally than internally. It is arguable that the 1972 Pym extension to the Ulster Museum in Belfast could be described as the reverse of this: rather strong externally but disappointing internally.

Externally, the Francis Pym extension to the 1920's neo-classical Wynne building is, in overall visio-structural terms, quite a convincing-looking contrivance. The elevations of the building present to the observer what might well be a stack of huge, dense blocks of concrete of varying sizes and alignments which jut in and out, with overhangs that are more 'corbelled' than cantilevered. Just as brick courses can incrementally project in a traditional wall under their own self-weight, here, it may be argued, it is similar, except done in concrete and on a quite gigantic scale. Those familiar with the building will know that it does not of course consist of a stack of huge, dense blocks, but this is how it

appears to the observer and so therefore one must assume that this is how it wishes to be read.



*The concrete blocks of the Pym extension*

An alternative reading of the Pym extension may be of one huge, single 'stone' from which an angular geometrical composition has been carved out. Furthermore, by its gradual merging with the original neo-classical structure, one might be forgiven for believing that the latter may possibly have emerged from the same block, but having been tooled to a more detailed and intricate level. Certainly, the grey concrete finish of the Pym extension matches in to some degree with the Portland stone of the Wynne building. Indeed, the whole museum building might remind one of an unfinished sculpture – of perhaps Michelangelo's Rondanini Pieta.

Whichever way one reads it, contrary to the views of some observers, the overall visual effect of the exterior of Pym's addition is actually quite restful. If the massive blocks of concrete were indeed just that, then there is no reason for the eye to doubt the viability or stability of the overall structure. Concrete is essentially reconstituted stone, and it could be argued that the Pym elevations in fact behave like big stones should: strong in compression, with limited ability to perform in tension. The arrangement of the large, overlapping blocks do not in any way present a precarious or impossible composition, as all protrusions or overhangs are of a limited dimension in relation to the scale of the 'blocks'. This apparent 'firmness' of structure, to use a Vitruvian term, provides the building extension with a reassuring gravitas, and with a strong tectonic quality. The extension is, untypical for a Brutalist artefact, in harmony with the very restful stone-upon-stone construction of the original Wynne building.

One very satisfying detail of the Pym structure is to be found on the main entrance elevation where an entablature on the Wynne building is continued into the extension zone and then appears to be supported (with an architectural wink) beyond the last ionic column by one of the large concrete 'corbels'.

Overall, the strength of the Pym extension lies in the fact that the façade material that is presented externally, in this case concrete, appears to perform broadly in accordance with the structural characteristics, including limitations, of that material.

But there are problematic areas.

Some elements depart from this discipline, especially on the main entrance elevation of the extension. For example, a relatively large and horizontal area of glazing has been introduced at third floor level and this has the effect of leaving a significant part of one of the largest concrete 'blocks' apparently corbelling off a weak glass partition, with the result that the façade here feels unresolved visually. Glazing could have been successfully introduced if done in smaller lengths and some of the large 'blocks' had been utilized to act as spanning 'lintels'. In these instances, the architectonic power of the building is weakened and the overall visual concept that is so strong elsewhere is compromised.

And it could be argued that the most disappointing element of all is the cantilevered entrance canopy on the main elevation of the extension. Here, as with many Modernist (and indeed contemporary neo-Modernist) buildings, concrete is forced to act unnaturally, to defy as opposed to express its innate structural characteristics, to take on a feigned ability to be able to perform under enormous tensile forces. The actual structure of the canopy, of course, is reliant upon hidden steel reinforcement within. The apparent structure, which is what the eye reads because it is what is presented, is wanting, as it is left to fight against the natural force of gravity. It is akin to the unsatisfactory sensation that would be created if, say, some of the columns of the portico of the Pantheon were removed and some form of hidden support or structural trickery was introduced to carry the famous entablature and pediment.

Of course, the architect of the extension most probably believed in the structural and indeed plastic properties of the material known as 'reinforced concrete' and did not intend his museum extension to be read as a purely concrete structure. Such a belief in reinforced concrete as a homogeneous material in its own right was common throughout the 20<sup>th</sup> Century and is surprisingly still held by many architects today. The truth of the matter is that reinforced concrete is not a building material at all, but two building materials - one visible (concrete) and the other hidden (steel reinforcement) - and the honest expression of this combo can never be achieved as the steel element (along with the significant structural contribution that it makes) must by definition remain concealed from view. Reinforced concrete designs invariably present concrete apparently performing contrary to its innate characteristics with serious implications for the tectonic integrity of the resultant architecture.



*The entrance canopy of the Pym extension*

Regardless of the aesthetic problems associated with the entrance canopy and the architect's acceptance of reinforced concrete as an authentic building material, the fact remains that the specific extent to which each massive, solid block of concrete overhangs relative to another just happens to be within the realm of believability. Indeed, it could be said that the elevations of the extension are generally speaking visio-structurally resolved, whether by design or by default.

However, no such visual satisfaction is to be found in the interior of the museum's extension. It is clear on entering beneath the 'hovering' slab of concrete that is the canopy feature, that what the external material and form of the building promise to deliver internally fails to happen.

On entering the extension, the seemingly dense blocks of concrete that dominate the external theme dissolve into a series of unexpected voids. The grand idea of an apparent external solidity is met by a hollow shell. The visitor is presented, as it were, with the back side of the stage-set. This would have been fair enough if the building had not been one designed to linger in. But a museum ought to attract and then hold the visitor. So, considering the lithic exterior of the building, one would expect to enter into a series of passageways and chambers hewn out of the solid concrete, in many ways similar to the spatial concept of the Egyptian pyramids – or like the holes and tunnels a mole would carve out within the solid earth.



*Interior view of the Pym extension*

The internal spaces of Pym's structure are very much of a free-flowing nature, and enclosure (and avoidance of enclosure) are bounded (or not) by concrete elements that act as the 'scaffolding' to the exterior concept. Again, these long, low spans, unnatural for concrete, are only made possible by the hidden reinforcement within.

One solution would have been to create a shell within the shell – a second, but internal and convincing stage-set, made up of, say, concrete elements behaving or at least appearing to behave as concrete should, defining an enticing series of passageways and chambers 'carved' out of and through that massive stack of concrete blocks that can be appreciated from the Botanic Gardens.

Buildings that are learned and convincing stage-sets have played their part well throughout the history of architecture and, whilst these may be secondary to, for example, real, load-bearing structures in terms of authenticity (and ultimately beauty), they are far superior to examples of stage-set architecture (much the norm, in fact, today) which are not visio-structurally convincing. However, it is clear that the original interior of the Pym extension of 1964 fails to deliver what was loudly promised by the external form of the building.

Summing up, the Pym extension to the Ulster Museum stands out as a rare example of a structure that more or less succeeds in its external form to communicate a strong architectural idea whilst, in general, remains apparently structurally logical and restful. The external façade offers the viewer a real sense of solidity, as well as a composition of parts that appears rather natural and relaxed, despite its stylistic pedigree. It's a pity therefore that, on its opening, its first visitors discovered that they had been beaten to it

by 'concretus hollocitus', a parasite that devours the complete innards of concrete buildings leaving just a thin shell.

In the end, a playful architectural concept such as that of Pym's museum exterior will never fail to lift the spirit or at least raise a smile – it is literally the concretization of a clever idea. However, one should remember that that is all it is. It will never be the pile of huge solid blocks that it aspires to be, nor a massive solid block which might one day be carved into a complementary neo-classical extension like the original Wynne building.

Enjoy the best bits of it - from the outside.

John Smylie, 2008