ON VALUE CONFLICTS: IDEAS OF AUTHENTICITY IN THE CONSERVATION & RENOVATION OF A HISTORIC BUILDING

INTRODUCTION

This paper examines what we call ‘value conflicts’ played out between a number of ‘actors’ involved in the restoration of a historic building for a UK university. It explores how these value conflicts reflect implicit tensions around the idea of authenticity. Newcastle University’s Armstrong Building was constructed between 1887 and 1906. The building’s historic value is testified by its listed status in the UK and it has undergone a number of transformations during the century during which it has been occupied. This paper will describe the design process experienced during the building’s most recent transformation, for which this paper’s authors were appointed ‘concept architects’. The renovation project, ongoing since 2010, has involved collaborations between a number of stakeholders, each with their own value systems and approaches to the conservation and rehabilitation of the building. Most notably, the discourse of efficient, profitable, and timely delivery has been promoted by the University’s facility management service whose ethos is predicated upon practical approaches to design and construction. Their estate-wide approach to constructing and maintaining University facilities includes a default palette of materials: suspended ceilings, carpet tiles, fluorescent batten fittings, vanilla paint, and plastic-trunking. We, as practicing architects and academics, questioned the application of this palette to a listed building, which tends towards a culture of generic ‘solutions’ as opposed to bespoke designs, specific to the spatial qualities associated with a historic building. This paper sets out to narrate the ‘value conflicts’ at work in the project, describing the design approach we adopted in the renovation of the Armstrong Building in relation to the attitudes of other protagonists. The paper concludes by reviewing the difficulties and opportunities involved in challenging standard, ‘default’ approaches to the restoration of the Armstrong Building. In particular, it reviews the multiple values at work among the various participants, highlighting how the reconciliation of these different approaches have been central to the progress of the project.

The Armstrong Building: An Overview

History

Newcastle University’s Armstrong Building is a protected, Grade II listed building located on the University’s main campus close to the city centre of Newcastle-Upon-Tyne (Fig. 1). The building is intrinsically linked with the formation of the University and is named after prominent Newcastle based Victorian engineer, industrialist and philanthropist William George Armstrong, who was instrumental in creating the College of Physical Science, the first incarnation of the University (Foster, 1995, Bettenson, 1971, Allsopp, 1977). The building was constructed in four phases between 1887 and 1906. Each phase of construction involved the erection of separate wings and elevations of the building. The first phase, The Old Quad Wing, is a heavy masonry structure designed and built by Architect R.W. Johnson from 1887-1888. The second phase, The Royal Jubilee Tower and Bedson Wing, was also designed by Johnson, with construction overseen by architect F.W. Rich from 1890-1894. The third phase; the construction of the Royal Victoria Infirmary Wing and the buildings centrepiece, Kings Hall, involved the introduction of wrought iron structural girders and reinforced concrete. It was designed by architect W.H. Knowles from 1904-1906 (Ryder, 2012) (Fig. 1).
Description
The building is predominantly a brick-built structure with sandstone dressings and Jacobean details. It charts the fashions of the time with arts-and-crafts motifs increasingly prominent in the Gothic revival details through successive phases. The majority of the building’s accommodation is spread across four floors, with the exception of two towers, one located on the Royal Jubilee Tower Wing and the other on the Royal Victoria Infirmary Wing. Originally the building housed a series of large laboratories, teaching rooms and lecture theatres (Armstrong, 2010) (Fig. 2).

Symbolic Qualities
As one of the oldest buildings on the University estate, the Armstrong Building represents the symbolic heart of the institution. The distinctive material qualities of the building offer orientation and direction around the surrounding campus. It regularly hosts key ceremonial and public events, from twice-yearly University Graduations to concerts, readings, performances and civic and social gatherings. The buildings grand spatial sequences, ornate detailing and quality material finishes are valued for embodying traditional collegiate values associated with academic and scholarly endeavours. These authentic qualities combined with the buildings historic legacy make it a significant edifice both to the University and city as a whole.

New Additions and Existing Conditions
Over the course of its inhabitation by the University, the Armstrong Building has seen its role and use significantly change. As the University grew and began offering a wider range of subjects so did the demand for space appropriate to varied teaching and learning roles. This organisational growth, also demanded new extensions and alterations, and consequently new methods for managing these facilities. The building thus experienced a wave of renovation and alteration projects from the 1960’s onwards, with little regard to the original detailing and the values it represented (Bettenson, 1971). These changes echoed the contemporary values of architectural theory and practice reflecting an era of technological optimism (Markus, 1969).

The Post-war Era – Modernist Values
This optimism bore witness to flourishing ‘Modernist’ architecture accompanied by different attempts in the building industry to seek greater levels of productivity and precision in construction (Glusberg and Architects, 1988, Frampton, 2007). Its foundational values are centred upon ideas of rational, functional and practical approaches to constructing space. This period offered a new level of material efficiency, at low-cost, with simple construction and easy maintenance (Kieran and Timberlake, 2003, Hughes, 2014). This involved the use of plain materials, whose grain, patina and assembly were expressed with a kind of structural ‘honesty’. In the context of the University estate, these values were manifest in rationally planned buildings, decoratively mute and in line with Modernist design principles (Corbusier, 1981, Jencks, 1987). These principles evolved later to form the ethos of the technical-rational ideology\(^1\) that still dominates the contemporary building industry and main stream

\(^1\) The technical-rational ideology is the epistemological outcome of the positivism theory prevailed from the 19th century. In the early 19th century, scientists and philosophers coined all intellectual operations outside mathematical reason as illegitimate. They condemned the subjectivity of human being as a partial perspective of the world that provides only a limited access to objective reality. Reason became the only accepted way to discover absolutely certain mathematical truths. Accordingly, physical and human sciences should be combined and handled exclusively through reason. This change of the western intellectual paradigm paved the way for the ideas of Positivism philosophy by the French philosopher Auguste Comte and the influential French mathematician Laplace (Perez Gomez, 1983). Schön describes “Technical Rationality” as an epistemology of practice that rests on the separation of means from ends, where instrumental problem-solving can be seen as a technical procedure to be measured by its effectiveness in
architectural design (Schön, 1995, Perez Gomez, 1983).

**The Technical-Rational Ideology**

What we call the technical-rational ideology reflects the peak of applying analytic thinking, management theory, and systems thinking in the building construction process. This ideology tends to understand the construction process through notions of practicality, productivity, and timely delivery represented often by tangible quantitative criteria of quality control. It involves following strict codes, regulations, and coordination protocols as well as satisfying the pressing economic requirements of the increasingly complex conditions of the globalised world (Abley and Woudhuysen, 2004, Glendinning, 2010, Cabinet Office, 2011, Ostime, 2013, Kieran and Timberlake, 2003, Robinson et al., 2010, CABE, 2003, Markus, 2003). The domination of this ideology is a reaction to the increasing complexity of the contemporary construction process that necessitates surrendering to technologies, to engineers, contractors, and manufacturers (Rem Koolhaas et al., 1998; McVicar, 2012). In turn, this ideology celebrated an idea of precision and a ‘fear of error’ within the process of building construction (Hughes, 2014, Vesely, 2004). Whether the rise of the technical-rational ideology drove a desire for greater precision and a culture of quality control or vice versa; both have become the dominating paradigm controlling the contemporary construction industry (Cuff, 1999, Tombesi, 2004).

**The Technical-Rational Ideology and the Armstrong Building**

Newcastle University’s facility management service along with other similar organisations across the UK have adopted the value system inherent in the technical-rational ideology. In the context of the Armstrong Building these values were implicit in radically reconfiguring the building’s layout and material quality. The original large, tall and grand scientific laboratories were carved up into smaller classrooms and cellular offices, suiting new academic needs, but creating labyrinthine circulation through the building. A palette of simple, plain materials were retrofitted into both these new spaces and the original volumes, disregarding existing geometric orders, patterns and a spatial hierarchy. Suspended ceilings expanded horizontally through the building, concealing decorative roof structures and ornate cornicing; and slicing off entire sections of glazing. Carpet tiles concealed parquet and timber flooring; plasterboard partitions covered over glazed brickwork and endless runs of plastic cable-trunking indicated the infrastructural refitting of the building to suit modern technological needs. These alterations combined to dramatically alter the aesthetic quality and experience of the building, with few clues left to demonstrate its original grand spatial sequences (Armstrong, 2010; Ryder, 2012). For better or for worse, these values can be seen to be more foreign than the Victorian values represented in the design of the original building. (Fig. 3, 4).

**Renovating the Armstrong Building: Design Approach**

Our practice was approached by the University in 2010 to develop a design study for renovating and reconfiguring the Armstrong Building in collaboration with the University’s facility management service. The Design Office is an architectural research and design consultancy operating within Newcastle University’s School of Architecture, Planning and Landscape. We focus on research-led practice and practice-led research with the majority of the works undertaken by the practice also appearing in Ph.D and research projects of the achieving a pre-established objective. This technical procedure were defined as the application of research-based theories and techniques — whose objectivity and generality derive through empirical experiments — to solve a certain problem. Consequently, a technical-rational practitioner tend to describe the problem under inquiry from within the stock of known problems and available techniques (Donald A. Schön, 1995).
practices’ members. In the Armstrong Building, we saw an opportunity to consider critical methods for approaching the building’s alteration, repair and conservation. As researchers, we operate as participants-observers in the project, learning as much about our values as architects as the values of those we work with. Our work has tended to involve challenging this dominant technical-rational ideology, understanding and appreciating the building’s existing condition in reference to its original layout and attributing value to both its original condition and layers of alteration, whilst balancing the diverse aspirations of varied stakeholders who would be involved in the project.

Our approach to the restoration and refurbishment of the building therefore required a response to both the original, historic value of the building and the current functional requirements of the University. To this end we were guided by mainstream conservation principles set out by UNESCO and the UK based organisation, The Society for the Protection of Ancient Buildings (SPAB)². In particular we appreciated the idea that any new works proposed in a historic setting, should be clearly recognisable as being ‘of its time’ in its use of materials, structure and organisation. This we felt was an appropriate approach to renovating the building, consistent with reading the archaeological layers of historic buildings, by clearly adding another contemporary layer to what already exists. Our approach therefore, developed on two key principles:

1) To open-up original spatial sequences and original volumes of the building by removing later partitions, creating clear circulation routes between a series of key rooms in the building.

2) To develop a series material hierarchies, different to both original and retrofitted materials, that would complement this clarified spatial sequence and add a new contemporary layer to the Armstrong Building (Fig. 8).

Value Conflicts

While our conceptual design approach was welcomed in principle, the process of its realisation was challenging because of the intrinsic differences played out between the multiple ‘actors’ involved in the project. These actors represented different value systems and approaches to the conservation and rehabilitation of the building; mainly between those who adopted values of the technical-rational ideology and those who placed greater emphasis on the building’s symbolic and cultural value than its role as an economic and functional asset. The technical-rational ideology found fertile ground in the construction management process, frequently deployed by various, different actors involved in the project. These actors have included the University’s facility management service; civil engineering consultants; mechanical and environmental engineers; the contractor; and the multinational project management firm appointed to oversee the project delivery. All displayed shared values inherent in the technical-rational ideology.

The existence of these two value systems within the project led to recurrent and frequent disagreements across the project, in what we have termed ‘value-conflicts’; instances where these opposing value systems collide in conflicting ideas over restoring the building. In each case these differences have been debated around attitudes to the imperatives of these two different value-systems, and the authenticity each system attempts to reconcile against

²The Society for the Protection of Ancient Buildings (SPAB) was founded in 1877, by William Morris a designer, artist and social activist as well as a leading member of the Pre-Raphaelite Brotherhood, who was concerned about the impacts Victorian industrialisation was having on historic buildings. More information on the history of the organisation can be found on SPAB’s website www.spab.org.uk.
attitudes towards to preservation and restoration.

We understand authenticity here in definitions developed within the context of theoretical approaches to working with historic buildings. In this context the term was first introduced in a broad sense at the 1964 Venice Charter, a set of influential guidelines for restoring and conserving historic monuments and sites, drawn up by a group of Venetian conservation professionals. These guidelines set out for the first time an international framework for working in, and with, historic contexts. However deeper readings of ‘authenticity’ were not further elaborated upon until the production of the Nara Document on Authenticity, created in the spirit of the Venice Charter, at the 1994 Nara Conference jointly organised by UNESCO and other international heritage bodies. This document reflected the multiple values and approaches to describing ‘Authenticity’ in historic contexts. It developed and defined it as an approach that is specific and unique, different from definitions of ‘identical’ which refer to ideas of reproduction, replica, copy, or reconstruction (Alho et al., 2010, Galla, 1995).

The idea of authenticity and creating an authentic approach to renovating and conserving historic buildings is therefore open to interpretation. It is reasonable to consider that each actor in the Armstrong project and each of the two-value systems at work could readily identify themselves as displaying authentic qualities. It is perhaps then, no surprise that ‘value-conflicts’ were experienced in the project. These conflicts have ranged in scale, from disagreements over the design of new, contemporary extensions to the building to disagreements over the use of specific materials. For example, in our proposals to restore the ground floor of the building we looked to make better use of an existing internal courtyard. In its existing state, the courtyard had become a ‘back-of-house’ service yard, under used and under-appreciated given its central position in the building (Fig. 3). Prominent internal elevations of the building face into this space most notably the main elevation of Kings Hall. This large assembly hall is a key room in the building, a grand space where important ceremonial events of the University take place. There was a shared mentality among the project stakeholders to reclaim this courtyard as a key space in the building, turning it from a service yard, into a primary thoroughfare and entrance into the building. This aligned with the University’s aspirations to further compliment the Armstrong buildings symbolic qualities by creating a ceremonial route through it and into the surrounding campus.

Our proposal involved creating a linear extension across the courtyard, a kind of ‘cloister’ or ‘loggia’, connecting the Quad Wing to the Bedson Wing and thus creating improved circulation throughout the building (Fig. 5). The intention behind this ‘cloister’ was to link the two wings of the building, connecting the restored courtyard to Kings Hall and a new vertical circulation core inserted into the Old Quad Wing (Fig. 6). The ‘cloister’ was to be understood as a prominent new extension, contemporary in its construction but using materials, such as brick, sandstone and oak to complement existing materials used throughout the building. This proposal was met, however, with concern from the University’s facility management service who viewed it as an excessive intervention to solve the accessibility issue that the brief demanded. For them, the ‘cloister’ would involve an excessive use of materials that would be of high cost and would be difficult to maintain. They desired to create a smaller extension to one corner, using a steel frame and curtain wall glazing that comprised of a ramp connecting an existing lift at lower ground floor level

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3 These included the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) and the International Council On Monuments and Sites (ICOMOS)
to the slightly raised level of Kings Hall. These cheaper materials and the inclusion of the ramp, it was argued, could be easily procured, meet statutory regulations, be simply constructed and well maintained, whilst still acting as a ‘contemporary’ addition to the building. This argument was in line with the imperatives of technical-rational thinking. We thus sought a compromise, for a solution which met the functional demands of the technical-rational actors but retained our design aspirations. The scale of the extension was thus rolled back, reducing material cost, but the use of brick, sandstone and oak was retained, preserving the intent of our initial design approach. (Fig. 7)

We experienced further value conflict in our desire to use construction materials closely linked to materials of the existing the fabric of building. Guided by conservation principles, we felt that the choice and combination of materials should reveal the preferences of those who originally designed the building and also demonstrate the availability of particular types of materials and technologies (Alho et al., 2010). Based on these ideas we proposed to clad an existing, but not-original, addition to the building using rolled-lead. This was met with similar resistance from the projects technical-rational advocates. Both the University’s facility management service and the main building contractor preferred using a cheaper option, Sarnafil single ply membrane based on its ease of application and maintenance as well as its long legal warranty. They believed this system offered a similar aesthetic appearance to lead, but at a cheaper cost and with a simpler construction method. We disagreed with these assumptions, believing Sarnafil would be detrimental in an historic context. Lead, we argued, had more visual richness and would be a more complementary addition to the building, with it already being widely used on the building for flashing and coping details. Again we sought a compromise solution with those who opposed our stance. We instead used a patinated zinc, a material which satisfied the technical demands of the contractor and facility management service, but also retained our aspirations for using a more appropriate material in the relation to the original fabric of the building.

It can therefore be argued that these value-conflicts should be understood not as problematic situations, but as necessary encounters that help balance different approaches in renovation and preservation of historic buildings. Accordingly, these value conflicts should always be considered as an inescapable condition in the process of this renovation and preservation. However we would argue that any speculative reading of future approaches to historic building renovation should foreground its approach with an understanding of the increasing predominance of the technical-rational ideology in the restoration of historic buildings. Such an approach should take into account the difficulties and opportunities involved in challenging default ideas in construction and use them positively to appreciate the multiple understandings of authenticity present in historic building renovation.

Conclusions

The value conflicts experienced during the renovation of the Armstrong Building reveals a range of preconceptions carried by the different actors operating within historic contexts. It is important to acknowledge, however, that these ‘value-conflicts’ are not confined

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4 Sarnafil® is a multi-layer, synthetic roof waterproofing sheet based on premium-quality polyvinyl chloride (PVC) with inlay of glass non-woven containing ultraviolet light stabilizers and flame retardants. Sarnafil G410-EL is a hot air weldable roof membrane, formulated for direct exposure and designed to use in all global climatic conditions. Sarnafil G410-EL is produced with an integral glass non-woven carrier for dimensional stability. Sarnafil is patented to Sika AG specialty chemical company headquartered in Baar, Switzerland. (http://gbr.sarnafil.sika.com/en/solutions_products/sarnafil-roofing-systems)
specifically to this project but may also reflect the broader ethos of the contemporary building industry when working in these historic contexts. This ethos reflects dominant ideas in the technical-rational ideology and thus opens up questions about its imperatives on the multiple meanings of authenticity in renovation projects. The majority of actors involved in the renovation of the Armstrong Building preferred a discourse of efficiency, functionality, appropriate risk management, and a precise coordinated delivery process. This involves sticking to tried and tested methods, and employing standardised design solutions used widely across the University estate. Oppositely, our design practice has taken issue with this method especially in the historic context of the Armstrong Building. We have reacted by challenging this ideology and the dominant values it involves. The resulting discussions made us acutely conscious not just of these technical-rational values but also our own: our design priorities, the legacies of our architectural knowledge, and our understandings of authenticity that our interventions aimed to achieve.

References


**Figures**

![Fig. 01: The Armstrong Building, The Royal Victoria wing (Ryder, 2012)](image1)

![Fig. 02: The Armstrong Building ground floor historic plan](image2)

**Fig. 03: The service yard at the centre of the Armstrong Building**

![Fig. 04: (The Authors) Many larger rooms have been carved up into smaller spaces with lightweight partitions as with the suspended ceilings.](image3)
Fig. 5: Authors (2014): The suggested cloister linking the building’s two parallel wings and making a new entrance from the quad. - The Armstrong Building Renovation phase 5

Fig. 6: Authors (2015): The Proposed Cloister: Making circulation legible and reconciling levels
**Fig. 7:** Authors (2014): The accepted proposal of the Quad sketch showing the proposed cloister - The Armstrong Building Renovation phase 5

**Fig. 8:** A view from Classic Library in the second floor – as built (Courtesy to Photographer Jill-Tate)