Vimy Ridge, Canada’s first world war memorial: restoration challenges of an early-modern structure

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Abstract

The Vimy Memorial is Canada’s principal memorial in Europe to the country’s contribution and sacrifice in the First World War. Rising from the highest point of Vimy Ridge, the monument forms the centrepiece of a preserved section of the Western Front, 14 kilometres north of the town of Arras in northern France. It was designed by the Canadian sculptor Walter S. Allward in 1921 and built between 1925 and 1936. Both the monument and what was to become a memorial park were new forms of commemoration and quintessential expressions of post-First World War sensibilities of loss and obligation; emotions that resulted in a felt need to honour the fallen in perpetuity. This paper outlines the identified historic values of the Vimy Memorial, and the problem of applying traditional conservation philosophies to a modern structure in protection of those values. It concludes by discussing the decision by the conservation team to restore the memorial to its original, pristine beauty, a decision that was based on the belief that it was possibly the only way to recapture the genius loci of Canada’s national memorial.

Introduction

Until the 1990s few First World War monuments had been deemed worthy of academic investigation. Rather, they tended to be seen as a collection of state-sponsored memorials, conservative in their design and sentiment, and falling squarely into nineteenth century monument traditions, with ideas derived from classical, romantic and Christian sources. This view of the First World War memorials only began to change when the cultural impact of the Great War became a subject of growing academic interest, following the publication of Paul Fussell’s groundbreaking 1975 study, *The Great War and Modern Memory*. A second influential work was Samuel Hynes’, *A War Imagined: The First World War and English Culture*, published in 1991.

Fussell and Hynes provided insights into how contemporaries had understood the Great War and emphasised the war’s significance in the cultural history of the twentieth century. Each examined the responses of writers, poets and painters who had lived through the conflict. They found that many had experienced an acute sense of a rupture in history that, in their work, took the form of fragmentation and ruin. Fussell and Hynes demonstrated that, if the war did not actually create the modern world, it fuelled its development and shaped its character (Laqueur 1996:3). Their work inspired a number of subsequent studies on war memorials, at the local and national levels. Writing in the 1990s, the American historian Thomas Laqueur pointed out that the inscription of many thousands of names on First World War memorials spoke to the modern fear of erasure. He also observed that the First World War monuments
may appear traditional but their designers had remade the classical language to express the modern sensibilities of loss and obligation, which demanded that somehow the past be kept present (Laqueur 1994:159). Among the examples cited by Laqueur were the Menin Gate in Ypres (Belgium) and the Monument to the Missing of the Somme at Thiepval (France). Historical, and architectural research undertaken into the Canadian First World War monument on Vimy Ridge in preparation for its restoration in 2004, revealed the same intellectual preoccupations as well as the artist’s modern sensibility to the monument’s formal qualities. This knowledge was to have a direct influence on the adopted conservation approach as the consultant team grappled with the challenge of adapting traditional conservation philosophy to a modern structure (Figure 1).

**Historical background**

Britain’s declaration of war on 4 August 1914 meant that Canada, as a member of the British Empire, was automatically at war with Germany. Prior to the commencement of hostilities, Canada had a small standing army of slightly more than 3,000 regulars, supplemented by 74,000 part-time militia. By the end of the war, the country had over 600,000 men and women in uniform. Its most notable contribution to the war effort came through the Canadian Corps, a force of some 100,000 soldiers sent to fight along the Western Front, whose courage and innovative methods earned it a high reputation. The battle for Vimy Ridge in April 1917 was one of several significant Canadian military engagements in the Great War, but has assumed a special place in the country’s history. It marked the first time all four Canadian divisions launched a simultaneous attack on a single front under Canadian command. At the end of the four-day battle, Canada’s force had suffered 10,602 casualties, including 3,598 deaths. Notwithstanding its high cost in human life, the successful outcome of the attack boosted the country’s military confidence. It also served to reinforce Canada’s awakening sense of independence and nationhood (Dickson 2007: 64).

The memorial that now dominates Vimy Ridge in the Pas de Calais region of northern France is Canada’s national memorial to the contribution and sacrifice of all who took part in the First World War. It also marks the capture of the ridge by the Canadian Corps on 9-12 April 1917. It honours the memory of the 65,000 Canadians who lost their lives in that war, and it records the names of 11,285 Canadians whose bodies were never found and who have no known grave.

**Architectural and cultural values of the Vimy monument**

The Vimy monument was designed in 1921 by the Canadian sculptor Walter Allward, who closely supervised its construction between 1925 and 1936, overseeing its realisation to the very last detail. Scaled to stand as a powerful presence in the sweeping landscape of northern France, the huge structure measures 70 metres wide, 61 metres deep and rises 36 metres above its base. It is built in reinforced concrete and faced in white limestone known as Seget stone. Two walls, one behind the other, define
the front of the monument. Each is anchored deep in the ground. From this base rise two tall pylons. This simple architectural design provides the backdrop for the enactment of a *mise en scène* involving 20 larger-than-life figures. These depict interrelated allegorical themes, evoking the myth of sacrifice, death and resurrection.

The drama of the sculptured figures unfolds above an empty tomb, or sarcophagus, which stands on the former battlefield at the base of the monument’s principal wall and symbolises Canada’s 65,000 war dead. Standing over it is the tall, shrouded figure of “Canada Bereft.” Deep in contemplation, she mourns forever her fallen sons (Figure 2). Between the pylons, two figures represent their heroic sacrifice and spiritual rebirth. The first resembles a crucified Christ, the second, holding the torch of peace, strains upwards towards six column-figures representing the virtues of Truth, Faith, Justice, Charity, Knowledge and, at the summit of the monument, the figure of Peace. At either end of the main wall two figure groups represent Canada’s ideals for which the young men had given their lives; ideals the living must strive to protect.

Preparatory analysis undertaken for the conservation project revealed a paucity of documentation, suggesting that the monument had not been the focus of earlier scholarly examination. At the historic site, interpretation had focused almost exclusively on military history, with very limited information on the monument available to visitors. The monument’s official commemorative message was well known, but the significance of the actual structure was not. It was at this stage that Laqueur’s perceptive analysis of the First World War memorials proved critical as it enlightened our understanding of Walter Allward’s explanation of his monument’s meaning. Divulging that inspiration for his design had its origins in a dream that haunted him for months afterwards, he expressed the fear and anguish of those living in the immediate post-war years:

> When things were at their blackest in France, I dreamed that I was in a great battlefield. I saw our men going by in thousands and being mowed down by the sickles of death...Suffering beyond endurance at the sight, I turned my eyes and found myself looking down on an avenue of poplars. Suddenly through the avenues I saw thousands marching to the aid of our armies. They were the dead. They rose in masses, filed silently by and entered the fight to aid the living. So vivid was the impression, that when I awoke it stayed with me for months. Without the dead we were helpless. So I have tried to show this in this monument to Canada’s fallen, what we owed them and will forever owe them (Vimy Clippings).

In disclosing the content of his dream, Allward revealed how his response to the catastrophe of the war aligned with those writers, poets and painters who believed that the war had shattered pre-war cultural assumptions. And, in struggling to create a memorial that could transcend the event and bring solace to the bereaved, Allward evoked emotions that were to preoccupy a generation of artists who lived through the war.

The pathos of Allward’s monument appears to have had an immediate impact on Canadian Prime Minister Mackenzie King. In 1922, he proposed that a larger portion of the battle site be acquired and preserved as a memorial park. He recorded his reason in a diary entry:

> I made a strong plea for conserving a tract of one or two square miles of Vimy ridge as consecrated hallowed ground around Allward’s memorial to be erected. The real memorial being the ridge itself, one of earth’s altars, on which Canadians sacrificed for the cause of humanity...This is Canada’s altar on European soil (King1922).

Acceding to the prime minister’s suggestion, France presented Canada with 100 hectares of land at the highest point along the Vimy Ridge. Contained within its boundaries were two military cemeteries and the remnants of German and Canadian trench lines. Before the First World War, there was no modern European or Canadian precedent for preserving an actual battle site as a means of commemorating the war dead, and the Canadian prime minister’s words harked back to those of President Abraham Lincoln sixty years earlier in his address at the preserved site of the Battle of Gettysburg, perhaps the closest antecedent to the Vimy memorial.
For the prime minister, as for Allward and many others who had lived through the war, the battlefields of the western front had assumed a sacred identity, transformed by the sacrifice of those who had died (Vance 1997: 56). Their spiritual quality captured the imagination of artists, searching for some purpose in the carnage. Many adopted this imagery in their work, most notably the British painter, Paul Nash, who was employed as a war artist by the Canadian War Memorials Fund and travelled to Vimy Ridge shortly after the battle. His paintings and drawings of the western front express not so much the drama of war as the metaphysical quality of the battlefield where so many had lost their lives.

If the meaning attached to the Vimy monument by Allward and its siting on a preserved portion of the western front distinguished it from pre-First World War memorials, so too does its architectural design. Prior to the war, Allward had enjoyed success as a creator of public monuments, working in an unremarkable late-nineteenth century style that was gradually breaking away from the Beaux-Arts manner with its reliance on hierarchical, pyramidal compositions and a realistic figure style. In the early years of the twentieth century he had travelled to Europe to study the work of August Rodin. The French artist’s work had a liberating effect on Allward’s sculptural compositions, but it took the war to prompt Allward to move beyond his former approach. Thus for Vimy, his first early-modern monument, he adopted a composition of bold, weighty masses and a figure style that abandoned realism and whose physicality served as a vehicle for psychological expression.

The same modernist aesthetic also informs Allward’s composition drawings. Architect Julian Smith, the Canadian leader of the international conservation team at Vimy, observed that Allward’s drawings emphasised simple volumes with unbroken surfaces, and manipulated light to give the structure its formal quality as a single composition. The texture and shape of the individual masonry units were secondary considerations. Smith also observed how obsessed Allward had been with maintaining the formal simplicity and harmony of his original concept throughout the building process:

For almost three years he searched for the perfect stone – smooth, homogeneous, white, luminous - and then he designed a system where the blocks were so large and the joints so fine, that there was almost nothing but stone visible to the eye. The mortar in the joints was coloured to match the stone, and tooled flush with the surface to eliminate even the hint of a shadow line (Smith 2008: 50).

Allward’s approach to applying the names of the missing was a further indication of his modernist vision for the monument. The structure was nearing completion when the Canadian Battlefields Memorial Committee decided that its outer walls should carry the names of the dead. The Imperial War Graves Commission (later renamed the Commonwealth War Graves Commission) had earlier developed a particular technique for this purpose. Under this, names were inscribed on individual panels that could be removed and replaced as required, without undermining a monument’s integrity. This served to facilitate subsequent maintenance. The Menin Gate and the Thiepval monument were both designed in this fashion. Allward, however, chose a different approach, carving the names in a continuous band that ran from stone to stone and across vertical and horizontal mortar joints. The effect was that of a lightly incised pattern that all but disguised the presence of the joints while maintaining the formal purity of the monument (Smith 2008: 50). Allward designed the alphabet and also the method of application using rubber templates whose flexibility sometimes affected the size and shape of the letters, giving the whole exercise an almost handcrafted appearance.

The conservation project

Barely three years after the monument was completed, Vimy Ridge was again under German military control as its armies swept across France. The monument survived the Second World War relatively unscathed, but in the 1950s, its walls began to deteriorate. Water infiltration due to a failure of the drainage and waterproofing systems was diagnosed as the principal cause of the deterioration. Despite attempts to resolve the problem, the monument continued...
to decay and by the mid-1990s, patchwork repairs of different stone types, calcite deposits, discolouration, spalling and cracking scarred its walls (Figure 3). Especially troubling was the deteriorated state of the 11,285 names of the missing Canadian servicemen inscribed across its walls. As public concern grew for the fragile and irreplaceable names, in 2001 the Canadian government resolved to repair or replace the damaged names, correct the technical problems, and recapture the monument’s aesthetic quality. Preparatory work was undertaken, the conservation program proper began in 2004 and the project was completed in April 2007, in time for the rededication ceremony on the 90th anniversary of the Battle of Vimy Ridge.

The challenge facing the conservation team was how the monument could best be conserved while remaining faithful to Allward’s ideas and wishes. A general standard in conservation is that, in order to protect the heritage value of a historic site, interventions should be as minimal as possible. But Allward had not designed a monument that could adapt to the normal weathering of age. Nor had he created a monument that could accept replacement materials of a different colour or texture, nor one that allowed the names to be easily separated from the walls. To protect the monument’s formal value, it was decided that a full restoration was necessary, and the work would have to include repair of the wall assembly. This, in turn, would mean dismantling and rebuilding the outer walls and removing the patchwork repairs that had gradually disfigured the monument over the years.

The debates that led the team to adopt such a radical approach were frequently intense and played out against the knowledge that, whichever approach was adopted would embody subjectivity and carry with it some degree of cultural bias. Julian Smith examined these issues in a paper published in 2008 in the *Journal Of The Society For The Study Of Architecture In Canada*, when he asked:

...what are the consequences of dealing with modernism if we decide that the abstract idea, and its formal representation, justify a continual cycle of reconstruction? Does the importance not only of materiality, but of the original craftsmanship associated with it, disappear from the discussion? (Smith 2008:53)

Smith illustrated his concern with examples of iconic modern buildings contemporary to the Vimy Monument: The Barcelona Pavilion of Mies van der Rohe, which is a complete reconstruction; the Villa Savoye, which has been heavily restored to preserve the formal perfection of Le Corbusier’s ideas; and Frank Lloyd Wright’s Fallingwater, whose formal qualities have also been carefully restored but whose concrete has been treated with a modern coating to protect it from deterioration. “In each case,” wrote Smith, “precedence was given to protecting the creative idea of the architect.”

Discussions over the value of the monument’s craftsmanship raised equally complex questions, most notably the dilemma of how to deal with the names. The Commonwealth War Graves Commission initially urged that, since the walls had to be dismantled and largely rebuilt, the names should be completely re-engraved within removable panels. But this solution would have undermined Allward’s intent for the walls to be perceived as strong bastion walls. Smith therefore made a case for preserving as many of the names as possible and replacing the illegible names in the same style and form of application as the originals.

One conservation option that might have been adopted would have been to allow the monument to continue to decay and, over time, become a ruin. This would have meant removing all later interventions and simply stabilising the decaying structure. Ruins are potent
triggers for evoking memory, but in the case of Vimy, it was never seriously considered. As the outcry over the loss of the names had demonstrated, the First World War haunts us still. Collectively we harbour that modern fear of erasure and cannot countenance the thought of allowing these memorials to disappear.

In advance of the restoration, a series of in-depth studies of the monument’s pathologies had been undertaken, but once the contract had been awarded, the prime consultant team decided that additional analysis was required. This involved taking core samples and performing more physico-chemical tests. These tests confirmed the deterioration had been caused by water infiltration, and revealed that the thermal expansion differential between the concrete and the stone facing had also inflicted considerable damage on the stone. This finding, coupled with the historical and artistic analysis of the monument, steered the conservation approach towards a radical intervention, which called for dismantling the entire base of the monument rather than restoring it in situ (Wertheimer nd:33). Before a final decision was taken, however, the various possible conservation approaches were presented to a blue ribbon committee, which had been appointed to advise the government on the restoration project. The committee decided that the purity of the original concept should be preserved. It directed that the new stone should match the existing, that as many of the names as possible should be conserved, and that all the replacement names should be designed and inscribed so as to be indistinguishable from the originals.

The next step of the project was to document the existing condition of the monument. This would provide a permanent record of the precise condition of the walls before dismantlement. Next, each block was individually numbered and an orderly process was developed for removing, examining each stone and storing those that were in sound condition and could be reused. Once the dismantling procedure had been finalized, the site was enclosed and machinery needed to lift the stone blocks, each of which weighed about half a tonne, was brought to the site.

Because much of the wall surface was covered with continuous lines of text, the dismantling process was an especially complex operation involving hundreds of fragile, hard-to-handle pieces. Accuracy was paramount because the walls’ seamless surfaces would not tolerate any imprecision in the reassembly. Beginning with the horizontal areas, a circular saw with a tungsten blade was run through each joint and then individual slabs were lifted out of place by a crane hoist. After each slab had been examined it was found that fewer than 50% of the platform and stairs stone blocks were reusable. The most complex aspect of the dismantling process was the question of how to separate the vertical stone face from the concrete structure. The approach that was adopted for this delicate operation involved specially designed circular saws with diamond-tipped blades that were held in place horizontally by a metal track that acted as a guide. A distance of 25 centimetres from the front face of the wall – equivalent to the narrowest thickness of stone facing and the lowest common denominator - was chosen for the saw cut (Figure 4). The stone facing was then removed from all four sides of the monument’s base, with the exception of two short sections. These are located on the east side of the monument where they had been protected from the elements and were in almost perfect condition. Left untouched, they will preserve a record of the original construction.

Sixty percent of engraved stone had to be replaced. The new stone, known as Seget was extracted from the original quarry in southern Croatia. Inscribing this stone with the names of the missing, repairing and reassembling the stones was a slow and tedious business because the names frequently ran over two stones, overlapping the vertical joint in the process, or ran across horizontal joints. To do justice to the original workmanship extraordinary

Figure 4: Dismantling the Vimy Memorial: row after row being cut away from its base. (Source: Phillipe Frutier, Altimage, for Veterans Affairs Canada, 2005)
precision was required, necessitating a lengthy trial and error process to validate various possible implementation approaches. A method combining the speed and regularity of mechanised engraving in the workshop with the flexibility and adaptability of manual engraving in situ was eventually agreed upon. The process involved the use of templates and an automatic sandblaster designed especially for the project. Once the stones were reassembled, thousands of characters which traversed joints had to be engraved by hand (Figure 5 and 6); a painstaking task carried out by Luc Goemaere of Group Monumental.

One of the most important changes in the monument’s reconfiguration was the introduction of a two-centimetre air space separating the stone facing from the concrete structure to allow for drainage in the event of water infiltration, and for independent thermal expansion of the two materials. As the walls were reassembled, the stone blocks were attached to bronze anchors inserted into the concrete. Bronze was chosen over steel for the anchors because the original anchors had been of bronze, a metal known to be both physically and chemically stable. Finally, the joints were filled with a new flexible mortar.

The preserved battlefield landscape

At Vimy, the preserved battlefield remnant constitutes a significant element in the memorial. After the war, the French Government had singled out the ridge for a reforestation program intended to regenerate a landscape, which had been devastated by the war. This program was coordinated with a simple landscape plan prepared for the Vimy site and developed in consultation with Allward. The site was planted with thousands of Austrian pines. In the French custom, the slender trees were carefully spaced in an orderly manner. As they matured, the trees were pruned to reveal rather than hide the battlefield landscape beneath. The result has been a canopy of pine-green branches filtering the sunlight from above, and an open, grass-covered undulating landscape of trenches, shell-holes and earthworks below. When it was completed, the memorial park appeared at one and same time heroic in scale and allegorical in meaning. The repetition of the trees, the long vistas and wide horizon lines evoked an elegiac mood to match a monument whose emotive power was reinforced by the interplay between the former battle landscape, the monument, the cemeteries, the forest, and the sky. The particular spirit of the ridge has doubtless contributed to the erroneous but persistent myth that a tree was planted for every Canadian who lost his life (Figure 7).
For Allward setting the monument on such a landscape added further complexity to its meaning. Significantly, he did not want it to sit on the crest of the ridge but be positioned in such a way that it appeared to grow out of the unbounded battlefield, where its mythologised interpretation of the war would forever confront the real tragedy. To achieve this effect, he chose to excavate the ground in front of the monument until the desired impression was achieved. He placed the empty tomb directly on the battleground and, when the monument was completed, this area was made into a grased space, referred to by Allward as the amphitheatre. The remnant landscape surrounding the sides and back of the monument was retained, thereby establishing a direct and powerful emotional connection between the monument and the ridge. The unveiling of the monument in July 1936, was witnessed by some 8,000 spectators, including many Canadian veterans who stood in pride of place in the amphitheatre, while family members observed the ceremony from its sloping sides.

Restoration of the monument provided a much needed opportunity to rehabilitate part of the memorial park and restore a sense of the sacred to the site. Inspired by the principles of the original landscape plan, extraneous features that had appeared across the site were removed and the ground around the monument was regraded in order to fulfil Walter Allward’s intention to establish a seamless connection between the monument and the battlefield (Figure 8). Change can, of course, embody its own poetic qualities. The memorial park had never had a suitable entranceway, one that clearly established a threshold separating the sacred site from the adjoining land. Accordingly, as part of the restoration project, a new entrance was built. A stand of white birch now shelters the entrance from the approaching public roadway. The landscape around the monument was restored by Greg Smallenberg of Phillips Farevaag Smallenberg of Vancouver.

**Conclusion**

Re-establishing the relationship between the monument and its landscape has given rise to new and unresolved conservation issues, including how best to conserve the natural and cultural values of the forest. But it has also revealed with great clarity Allward’s memorial vision while confirming that the Vimy Monument represented a radical break with nineteenth century

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Figure 7: The Vimy Memorial restored: the architect’s original intention for subtle grading to seamlessly bind the monument to the earth was fulfilled in the restoration. (Source: Blair Ketcheson for Phillips Farevaag Smallenberg, Spring, 2007)
monument design and the Beaux-Arts tradition. It has been observed that the only response to tragic events lies in the resilience with which the situation is confronted and the “depth and artistry with which it is framed” (Eagleton 2002). As an artist who had lived through the war, Walter Allward understood that his role was to respond to the “inexpressible calamity” in a way to which people could relate. Vimy’s originality, beauty and workmanship attest to the lengths to which he went to ensure a response that was of its time and timeless. The memorial on Vimy Ridge is not only Canada’s national memorial but also an important Canadian early modern work of art and an enduring image of the First World War.

References


King, W.L.M. King Diaries, 26 April 1922, Library and Archives Canada.


Vimy Clippings, Allward Fonds, Queen’s University Archives, Kingston, Canada


Endnotes

1 A dissentient view was espoused by Jay Winter (2005), a leading English-speaking scholar, who noted that most post-war memorials were “framed in traditional language of shared ideas.” This, he argued, was because only this shared language had the power to heal.

2 The prime consultants were Julian Smith, principal of Julian Smith & Associates Architects in Ottawa and Daniel Lefèvre, principal of Cabinet Lefèvre of Paris. The general contractor was Group Monument (Monument Vandekerckhove) of Belgium, led by Ghislain Claerbout.