

Conservation and large technological artefacts: a curatorial perspective

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My name is John White. I'm one of two senior curators of technology at the Australian War Memorial - I look after things that fly and float; the other curator, Mike Cecil, looks after all the land based technology. I started here in 1987, and I'm going to talk about some of the major changes in the last twenty-five years in the ways we have approached large technology objects.

The Memorial's Act calls for the organisation (the Australian War Memorial) to develop, maintain and exhibit a collection of material of national significance. Now, the significance of the collection is not some generalized notion. It's not that the Memorial is important and therefore the Memorial's holdings must be important, it's that the collection actually contains the most extraordinary material. It contains many items which are really significant parts of the Australian National Collection; think of G for George, think about the midget submarine. There are many other items – not just talking about large technology but across the board – which are of national significance (and indeed of international significance because they are items produced overseas), which because of the vagaries of history might either be unique or possibly the best and most original examples remaining in the world. It's quite a responsibility to manage a collection like that.

Now in many cases these objects were chosen because of their history. For instance in 1944, whilst the D-Day invasion was raging and Britain was fighting to take back the continent - working with the Americans and the Allied Corps - somewhere in the infrastructure there was a person who was a representative of the Memorial choosing a Spitfire for preservation. G for George was selected for preservation by mid-1944. So in the midst of all that turbulence there was some astonishing forward thinking going on about what would actually constitute an item of significance which needed to be preserved. Our Messerschmitt Bf-109 was selected by the British forces as one of a small group of German aircraft, not for evaluation for flying, not to understand the technology, but as museum display objects. And to that end the British decided not to paint markings and serial numbers on the items, so that that Bf-109 arrived in Australia virtually untouched and again, through the vagaries of history, has come down to the Memorial in the present day in the most extraordinarily original condition. It is the only one of its type to be in that condition in the world (except perhaps one from a lake), but in more general terms the only surviving front line Second World War German military aircraft apparently in a completely untouched condition. An extraordinary thing to find here in Australia.

Now curators charged with this kind of problem have to do some careful thinking. When I arrived here in 1987 I was faced with a pretty daunting situation. We had poor storage for our large technology collection, both in terms of cleanliness and condition. We had a store called Duntroon. Duntroon was a place where cats went to die - there were literally dead animals inside objects! There was material falling from the ceiling, dust, there were enthusiastic persons living nearby who considered it was a challenge

to break in and steal things and had been doing so for decades. We had objects the size of G for George and yet our total aircraft handling gear consisted of a couple of broken jacks, a couple of stands and some automotive gear. We relied heavily on outside help from the Services and in some cases private individuals to assist us to move objects. In terms of collection care we were at such an embryonic stage of taking care of our material that there were a lot of problems. We had people driving cranes and lifting objects who had never handled an aircraft before, and they certainly didn't know about our aircraft. They didn't understand the importance of looking after a museum aircraft. We had a lot of little accidents, a lot of handling problems.

We had poor building access – the Memorial's buildings, opened in 1941 and later extended, had been gradually built in. In the hall where the Lancaster was displayed we had to bring in a crane with a 10T capacity to put in a La Rhone rotary engine – we didn't have a door large enough to bring an item that size into the building without a crane. We also had tremendous limitations on workshop space; we had limited funds and limited access to them. When I arrived we had six aircraft projects which had ground to a halt. They'd ground to a halt for reasons including –

- we didn't have treatments developed to apply to those objects;
- the contractors had their own problems and were unable to carry on with the projects;
- we were dealing with contractors who proved to be very “interesting” people and one of the first things I had to do was to break the contract arrangements and flee in the other direction!

So as a curator looking at all the aspects of what we needed to do to manage the collection, I had to look at my resources to see what were the most important tools that I had to hand and even at that time the Memorial had pretty much unparalleled resources in conservation, both intellectual and in terms of the development of the new conservation buildings here. Now, people joke about curators and conservators – how they get on and whether they talk – there's a perception that curators and conservators often come at objects from different perspectives and have different ideas of what is important and different ideas of what the management of those objects involves. But I looked at that conservation resource and thought – how can I apply that and make that work for the long-term management of the collection?

Now, think about what this management problem involves. It is long-term preservation. There is no statute of limitations in the Memorial's Act. It says we will keep and maintain this collection; it doesn't say for ten years or fifteen years, or a hundred years, but forever... and forever is a very very long time.

As an example, in 1987 we had a P51 Mustang. A very original aircraft – it had survived as a technical training aid and retained a tremendous amount of original fabric - surface finishes (including the original manufacturer's transfers), the seat cushion with “US Army Air force” in the cockpit - and the object had grown old gracefully because it had not been outside and it had been relatively well cared for. We had an Avro 504 on loan to a large airline company. They'd had a bit of a problem and had recovered the fuselage, but the wings and the tail plane retained fabric which as far as we can determine goes right back to 1918 and is still doing a remarkably good job.

We had the Lancaster and we had some volunteers working it, and we really weren't going very far with that project because we were pouring an enormous amount of effort into some very small aspects of the project and not stepping back from it to take a good look at the machine. We had, as was mentioned, the Sea Furys out on loan to the navy, and the navy were running into problems with them. So it wasn't actually a very encouraging scene.

I spent a lot of time going through those projects and identifying ways in which we could proceed. We cancelled the Tiger Moth – we went and got another one later on. We cancelled most of the existing work programs on the Lancaster and dropped back to do a great deal of research on the machine which carried on for some years; and it's interesting to note that we started researching it in 1987 and completed it in 2003 which gives you an idea of the complexity of the project that we undertook on the Lancaster.

The Mustang – we were able to take what we had as a starting point for the aircraft and add more original parts back into it; not parts from that machine, but parts that we knew were new production spares for Mustangs. We managed to find a pair of wings for it (the original wings had been cut) which were from the same production batch as the original wings, and fit those to the machine. So at that stage we were picking up on elements of conservation logic to say “We've got an original object – how do we preserve those features and how can we augment those features and still retain the character of the item?”

Now, one of the most important things that I loved about conservation was that conservators were very relaxed about distressed objects. Objects are often over-restored and the Memorial's collection had these objects which, because of various historical reasons, had not been touched in decades. We had a tremendous opportunity to save a lot of material which had been delivered to us by what was – on the face of it – neglect, but which in fact turned out to be very fortuitous.

So looking at those machines, we did some experiments. The Avro 504 – how would we preserve that eighty-year-old fabric? We looked at ways of retaining areas of original fabric - relaxing damaged areas, re-doping damaged areas; and a lot of ideas which we were thinking about in that first stage reached their first practical application in that machine and some of the other projects.

With the Sea Fury our basic problem was that we had aimed our restoration concept in the wrong direction. The initial idea was that navy would take the three aircraft (including their one) and use the best parts from all three to form one flyable machine and put together a machine for the Memorial from what was left. After a while we realized that navy's flying aircraft was not the most important thing for the Memorial to come out of that group of aircraft. We had to get back for the Memorial a good, displayable machine that addressed some of our collection requirements, and was not what was left over after another major restoration project. It took years to articulate that and to get that message through the various channels of communication between the Services and the Memorial, but with a lot of goodwill and a lot of rethinking on everyone's part we got the machines returned to Canberra pretty much as they had left - although they had been extensively dismantled and damaged in some minor ways

through that dismantling. But we got them back here and started from scratch with a new project.

Conservation influenced in this development process very strongly. From 1987 to perhaps 2000 our ideas about how to handle these objects progressed in steps. We would try something, experiment with new techniques and treatments. We experimented with the idea of putting on display an object which was half conserved and half restored. For instance when you look at the Beaufort you will notice that there are features on that aircraft which are clearly fifty years old and features which are clearly last week. But when you step back from the object they don't really fight against each other. And the idea is that when you look at that machine you know – deep in your heart – that you are looking at an object which is real. And I like that notion of preserving things which are real.

When I first came here I climbed out of the Lancaster – which at that stage had a very nice coat of paint on it but which was not very accurate because it was based on the instructions from the Airfix kit – and I was asked by a member of the public “Is this thing real?” And it had never occurred to me to ask this question of whether the Lancaster was actually real. And I stepped out of the aircraft and turned around and looked at it and it dawned on me that it could have actually been a very large Series 8 Airfix kit from the appearance of it. It was too neat. It had no flaws on it that you could see. There was nothing which spoke from it about the fact that people flew it eighty-nine times over German occupied territory, that it was shot at, that it was rebuilt, that it is the outcome of a very complex development and mass production process. You'll be hearing more about these notions that we found from looking at the machine and that our conservation staff did such tremendous work to help identify and document. It was from those kind of findings that we developed a new way of looking at that Lancaster and a new way – for me as a curator- of understanding what that aircraft actually was, and how it appeared at certain key parts of its history.

Other conservation ethical points which embedded themselves in our work were the basic standards for accommodation. Believe me – having worked now for some years in an area where all our storage is either air-conditioned or controlled to some extent, and we have objects which aren't covered in dust and don't have dead cats in them – believe me that's the most amazing step forward because we are not retracing our steps all the time. Once we work on an object and do significant conservation and restoration treatment on it, its rate of deterioration is then very minor. We can go onto other things without having to find, two years later, that we've got to do large amounts of work over again. This is very important from a planning point of view - over the last seventeen years I've been here I've seen seventeen aircraft projects completed. That's a phenomenal rate for a place with a relatively small budget (until recent years) for major conservation or restoration works. And I do like that notion of “If it ain't broke don't fix it”, and I've always added to that “If you do fix it you can't go back” and “The object is not going anywhere fast, so take the time to have a decent look at it.”

Aged objects are, I've come to realize, legitimately interesting and valuable within themselves. Mention has been made that our sampling of our visitors to the Memorial shows that our visitors do understand when they are looking at a real thing. Now, it's possible someone might say “Perhaps if it was completely restored and polished and

looked fantastic, that would be better. People would be even more impressed.” But the strange thing is that even among general visitors that is not the case. People understand and appreciate a sense of history. The gentleman who asked me about the Lancaster did not ask me about the Spitfire which was sitting next to it, which had not been repainted in fifty years and which is still one of our most extraordinary objects.

An object needs to be known by a curator, and conservators, with their detailed cleaning, stabilization and examination of objects, open up tremendous windows for a curator to understand just what their item is. When we looked at G for George we found tons of material evidence inside the machine of its construction, its operational use and things that had happened to it post-war. All these things were things we needed to know so that I, as a curator, could look at that object, know what it was and then say “It is ‘this’, ‘these’ are the things we can do with it, ‘these’ are the features we need to be stressing in our interpretation of it and ‘these’ are the material evidences of strikes, battle damage, use-wear and other things that would be interesting to a member of the public as part of interpretation”.

And the other thing that I really like about conservation is that it presents me, as a curator, with lots of options for how we can deal with an object. For instance we were working on a Mosquito. When I arrived here it was proposed - because we were half way through a wing rebuild - that we would continue with the wing rebuild but that we might preserve original material in the fuselage, which was in very poor shape. Then it swapped over and we were going to leave the wing alone. But we were able to develop a way of injecting the timber structure so that we actually kept large amounts of the very badly deteriorated wooden wing in a way that we had been told previously was not possible. We not only kept the original material, we cut the amount of time needed to bring that object to a stable and displayable state by two thirds. Now for dollar reasons that’s of enormous importance if you’re trying to work out - as a curator - how to get a project through from the beginning to the end. Conservation offered us options in terms of how we repainted objects - putting preservative layers on and painting over the top and inpainting damaged materials but leaving other areas intact. Because the objects were so large we could be a bit flexible - perhaps we would preserve in its original state one part of an object which had typical features across a lot of the structure, and in other areas we could do more aesthetic and more restoration based treatments to bring the object together as a whole so that it could be seen as a complete object. The idea is that we both had our cake and ate it too, and conservation ideas gave a lot of assistance on how we could develop a project along those lines.

So in my experience here conservation has been one of the most powerful influences on how we’ve handled this collection and - apart from bucks of course - the most powerful tool. I talked to you about the situation we had when I arrived, but look at the situation now. As a curator looking after the aircraft collection and most of our naval items, almost everything is under cover, almost nothing is sitting outside deteriorating that isn’t robust enough to deal with those conditions. We have handling gear that allows us to pick up objects and move them without touching the object itself. We are one of the few places that, if given the job of dismantling a Lancaster, we could use our own gear, do it in-house and have the thing apart in probably five weeks if it was an emergency. When we are programming projects and we are coming up with concepts for how an object can look, I have the tremendous support from a

conservation ethical point of view, of the notion that it's worthwhile preserving original features. And not only is that a good idea for the members of the public from what we know about their tastes, but there are serious economic advantages from adopting a conservation approach to a project. And these influences echo on – they're now so commonplace in the way we handle these large technology objects that it's been interesting sitting down and teasing out some of the elements of approaches we take for granted now which just weren't part of the agenda in the early eighties. And I think it's an indicator of how far we've come that we've made those kinds of steps.