



Warren Langley  
*Spirit of Mars*  
 1989  
 kiln cast and fused float glass  
 with applied colour  
 80 x 66 x 25 cm



Warren Langley  
*Breathe* Museum of Glass, Tacoma Washington  
 2004  
 polycarbonate with remote source lighting  
 on water  
 3 x 25 m

*When someone asks what you do, what's your answer?*

I try to avoid telling people what I do. I realise for others it is probably vaguely interesting in a bazaar way, but I just don't want to talk about it. You realise that what you do is more interesting than what other people do and I find that uncomfortable. That's a little to do with self-consciousness. It almost 'false pretences' – like rock star, or neurosurgeon. It's something that is outside most people's frame of reference.

*Implying 'romantic'?*

No! I see it as the exact opposite, but I think a lot of people do see it as romantic and that is why they want to have a yarn about it. I see it as what I do for a job. This is my living.

*But if you had to say what you did?*

I certainly never use the term 'glass artist'. I have a big problem with that term. Back when I was working more with glass than I do now, most often I would reply that I worked with glass. Depending on how far they wanted to pursue the conversation it could have meant I was the local glazier. I would leave it at that. If they pursued it further then the conversation evolved.

These days when I am asked the same question I usually say I work with public art, because that is pretty much what I'm doing now. I very rarely show.

*Implying a 'tradesman' like approach.*

Materials and technique are a big part of my practice. I find that the creative side of it, which has always been the driving force, is for me to know about. That's my reason for

doing it, but I suspect that will sound egotistical, or boring if I started laying that on them. I assume they are more interested in hearing about how you do it, rather than why you are doing it.

*You are there to make a buck?*

No. It's driven. It's an adrenaline thing. I'm an adrenaline junkie and I think that's why my work mutates and changes so much over the years. It's because I'm always looking for some new excitement. I am not good at standing still for too long with the one process, or the one technology. There is always too much else to explore.

*You were with Australian studio glass at the beginning when I'm told it was very exciting and adventurous.*

That's right, it was and that's probably when it did have romantic potential. In those very early days, when there were no mortgages and no kids to send to school, it was pretty romantic. We would drift from one person's studio to the next having a great old time. We became more pragmatic as the years went on, but in those days it was really exciting to be part of something that was so new at the time.

It was this worldwide revival of glass. Once it went back to the studio scale, once it was taken out of the factories, it was the only place to be. Throughout the eighties when I was developing so much new technology with all those processes we were using, that was exciting too. I'm still developing. Even with my glass I'm still using processes that nobody else uses. In kiln forming for architecture there is some interesting technology that I have developed recently that is really exciting, and if I were still in *Ozone* it would get a lot more exposure.

*You were there at the beginning of Australian studio glass?*

A couple of years after the glass blowers. I came back to Australia hot to trot and set up a glass blowing studio. That was the year that Dick [Marquis] had been out here, or very close to it. I was in the States for a year or so and that's where I started. I came back ready to go and I was surprised to find that other people were here.

I had been working with stained glass here in Sydney. Doing it in the night-time and weekends and doing a few classes. I was only interested in contemporary stained glass. I wasn't interested in lead-lighting per se. I remember going into the Hogarth Gallery here in Sydney and there was an autonomous panel hanging in the window. For a start that was an eye-opener because it wasn't part of the architecture. You could treat it like painting and hang it in front of a window. That was a huge revelation, but it was also the whole nature of the subject. It was three-dimensional. It had a brick breaking through the window that had been all leaded into. It was by this guy call Paul Marioni, who has subsequently become one of my oldest and dearest friends.

I decided to go overseas and learn more about this material. I was in Los Angeles and I saw an advertisement for a workshop that was being taken by Paul Marioni – the guy who made the panel I saw hanging in Sydney. (Paul didn't realise that panel was ever in Sydney and didn't know how it got there.) That was the beginning of a lifetime friendship.

That was 1976-7. I went to the workshop to do leaded glass with him, because he was breaking some serious new ground with laminating what was in those days

cyberchrome prints between the glass and doing all sorts of interesting stuff. During the course of the workshop he kept talking about 'hot glass' and I had never heard of 'hot' glass before. Then he kept talking about this place called *Pilchuck*. He was leaving the day after the workshop to go to teach a session at Pilchuck. I got more and more interested in what he had to say about this place. (They were the days when you could contact Pilchuck the day before the course and get a place.) He talked me into going. I had saved enough for travelling for about three years and I blew it all in one summer on Pilchuck. I left the same day he did, driving non-stop to Seattle thinking it was just around the corner and four days later I get there in my little Volkswagen bus.

I enrolled in the glass blowing course. There were four instructors. They were Dale [Chilhuly], Dan Dailey, Fritz [Dreisbach] and Marvin Lipofsky. The old school – the whole four of them were there and they were my teachers. Ben Moore was the T.A. and he taught me how to take my first gather of glass. I was surrounded by these guys and they have become my friends – some more than others. It was a great way to start.

I came back here not even knowing that there was anybody doing hot glass here. Within the first days of being back I had touched base with the Crafts Council. They said they were having an exhibition of glass in about a month and that I had to be in it. That was the beginning. We went on to found the Glass Society [Ausglass] and I was able to meet a lot of these people. Nick Mount and myself are still closest mates and, with a few old faces around the traps, we are the 'Dinosaurs'. It was an exciting period.

*I read the piece you wrote in '91 ['Ethics and Survival', Ausglass post-conference report] where you were talking about the 'ownership' of particular approaches.*

Probably techniques more than anything.

*Is it that, as part of the glass culture [and it's probably part of any modern creative undertaking], you try to do something that is yours? Something to establish an identity – to create forms that you 'own'.*

I don't think it has to do with 'ownership', it has to do with professional integrity. If someone produces a body of work, which is decidedly distinctive and very different to anything that preceded it in the public arena, then in the context of my professional ethic, it represents a no-go zone. If imitators immediately jump on board you at least expect their integrity would lead them to challenge what you have done and take it in yet another direction. This is the nature of creative exchange and development. You don't expect to see work with no discernible difference.

*There appear to have been people who were exchanging ideas, but on the other side there were people trying to establish their identity within the field by developing techniques and forms that they then 'own'. So while everything is 'new' some people get credited with 'owning' techniques and forms.*

I think that is a new phenomenon. I've never had any secrets. That is probably why I was in demand internationally as a teacher. What I expected though was, when you had developed something that was so distinctively new and so recognizably your own development, that people (particularly if they were in your geographic market place), would have the respect to not go there. It didn't matter about disseminating the information, I was doing that myself both here and overseas, but if you have developed something that is really new, exciting and distinctively your development, you would

like to think that you had the opportunity to get that out and about and receive due acknowledgement before the plagiarists arrive. It is simply about professional integrity, and is no different in any arena of art and design.

I think the issue here was outright copies. People would comment on a project they had seen (thinking I did it) and I would say, "No, I didn't do that". I had not expected this even though I had been so free in going to Sydney College and elsewhere and teaching procedures. It was the first time, certainly in Australia and to the best of my knowledge elsewhere, that kiln forming processes such as this had been developed and applied to architectural scale applications. The Egyptians knew that if you warmed glass up it softened and took on the imprint of its mould. The processes I developed allowed this knowledge to have contemporary architectural relevance. The idea of casting onto a bed of sand was such a huge leap because it allowed us to have a non-warping kiln shelf of infinite dimension and that had never been done before. Everything that had been formed in a kiln for an architectural application had been done onto some form of kiln shelf and that severely limited size [demonstrates 600mm x 600mm]. We could do that six meters long by two meters wide and it wouldn't warp. (Once glass warped you couldn't get it into a frame.) I remember the day I came down to the beach and got a bucket of sand. We had tried every refractory material available. All were expensive, time consuming to set up and most importantly had warpage issues, so in many ways it was a revolutionary step in kiln forming technology. I am still amazed today, almost 30 years later, that people working with this process are still struggling with kiln brick and various ceramic boards and papers. The sand 'printing' process opened up the most mind-blowing possibilities.

*The 'ownership' issue was a matter of courtesy?*

That's all it was. Professional courtesy, at least for a couple of years, so that the media and the architectural community had time to acknowledge your contribution. Because I was so free with information I just assumed I would receive that courtesy. The reason why by the mid nineties you could barely go to a country in the world that wasn't now using those forming procedures, was largely because I was teaching workshops in all these countries (in France and Switzerland and Spain, in the States and Canada). Of course you expect to go back to find studios set up doing it. But even five or six years later, when people started teaching workshops I used to often see (and all credit to them) that a workshop in Europe would be advertised as 'teaching architectural glass forming in the style of Warren Langley'. At least that was someone acknowledging that was where they had learnt it. That was never the case here.

*I thought people who were the 'Fathers' and 'Mothers' of glass had a 'turf' of techniques and forms over which they had some feeling of ownership. As if they were the first into the country and they took up tracks of land.*

No, I don't think that was the case. I think professional courtesy is the right term. We would design and develop a project right down to the artwork and suddenly there was a studio here in Sydney who would regularly approach the architect or client, and offer to do the project cheaper, quite often with our design. It was ruthless, completely lacking in integrity and (as we were so often told) downright libellous. I still hear stories, but feel I have moved on so far since then, it is no longer of any consequence.

*What are you are doing now?*

There are a number of times in my life when people have said that it must be so different, so far removed from where you were then. This even applies back to my days in the scientific community. I have never seen my career like that. It has always been a progression. I can explain the links. They are so evident in hindsight.

For example the beginnings of the interest in (remote source) light were purely and simply that water (because I am interested in scale) was the biggest piece of glass that I was ever going to get my hands on. And so all of the early light stuff was fibre optic enabling us to take it into the water. It was all done here in Sydney harbour at night. It dealt with all those same issue – reflection and refraction. It was just a big piece of 'glass'. When people said, "Oh boy this is so different" – it was not. It was metamorphosing and the glass continued – as water. Then finally the obsession with light itself meant that it started to climb out of the water (a bit like the amphibians) and got more and more involved in the landscape and then from the landscape into the built environment.

So the desert work was still in the early stages of my light works, where I was fascinated with the way it was interacting with the natural order. But now I'm even more excited about what we can do with the buildings and that's morphing into its next stage now. It's traceable.

*Returning to an element of glass – the quality of light?*

Yes, and also the frustration in the way a gallery restricted scale. I really wanted to make it big.

My interest in my gallery work was always twofold: one it gave me a vehicle for my little narratives. It was a way to make something and get it out because you just wanted to get it out there. But I suspect the second (of the reasons for maintaining that exhibition profile) was largely for the public relations benefit. It was an easy way to keep your name out there. It's hard to win opportunities to do big public buildings. You could wait around for years and nothing may happen, so in the interim you keep your name out there by doing the other stuff I enjoy doing anyway. That's why more and more I've just dropped my exhibition schedule right away, because I've had a succession of competition wins on architectural projects, and that's really where I wanted to position myself. Now there's not as much time for playing with my little narratives. It's not quite so necessary in terms of my profile.

In this climate I'd hate to be one of the glassmakers who depend largely on exhibition sales. It's a lot of time and a lot of effort to put a show together and not to get some reward back from it.

*Objects aren't selling?*

I think the American market has dropped back a lot and luckily we haven't really been affected, because we're dealing with a different arena.

*This is architectural work?*

A lot of that dropped back as well, but there is enough out there to keep going.

*The financial scale is different?*

Totally different and you know that at the end of it you're going to get your money back, whereas with an exhibition it can be three months work and thirty thousand dollars worth of materials to get nothing back.

*What are your interests and concerns?*

I'm fascinated by these two properties of light that don't get acknowledged as much as they should: light has line and volume, and we tend to see light as just this stuff that fills available space. I'm interested in the fact that there can be line. (That's what a lot of those linear light works are about.) Also it's something that I can use to encapsulate and create volume (create volumes of light). So a lot of the work that we're doing at the moment is about light as volume and still this 'light as line' thing. That's the academic issue at the moment. I just had to apply those two things to the built environment.

Ultimately it's about integrating these artworks. We've been doing a lot of R&D this year with some quite extraordinary effects, but one example of the idea is the entire facade of a building, or an entire internal wall, becoming the artwork. It's not something that is placed in front of it. It's not something that attached to it. The wall itself is emanating light. The entire wall is like a huge impressionist painting giving out light. We've just finished a big project in Perth, which address that to a certain extent.

It's an 18m high tower that is effectively a huge light drawing you can see from kilometres away. As you approach it effectively pixelates. Circular, laser-cut apertures in the steel allow the light to emanate. Probably not two in the thousands and thousands of apertures would have the same colour hue because it's all about the colour mixing behind it. I've got this notion that the pixel is the molecule of the 21<sup>st</sup> century. We use to break it down to molecules once, now we break it down into pixels. I'm fascinated by this notion of an image that reveals itself as you move away from it and then as you get up close to it, it pixelates. A lot of the light things we've been playing with have been around that.

*You've extracted an essence of glass – a quality that attracts and seduces, then extrapolated that.*

That's exactly what's been happening. It's about twelve or thirteen years since I started doing these explorations into light as a viable material, and now it's been extraordinary watching how many people are on this same bandwagon. A lot of light-based work is happening now. It is largely because of the technologies that are out there. The problem is most of the technologies are maintenance minefields. So anyone can create these fabulous things, but in eighteen months it can die expensively and it's another thirty thousand dollars on a projector.

What we're doing (it is something we have always done) is find low entry thresholds to these technologies, going right down to the simple end. That is what we did with the glass when we asked, "How can we cheaply make these slabs of glass?" Now it's how we create these extraordinary effects, which cost \$49.95 instead of \$49, 950, and how can we give them the longevity that public art requires? So we're using really high-end technology in the simplest way.

We did this project in Canberra last year – these big acrylic cubes and we put a single one-watt blue LED in either end and they just glowed blue. People can't believe it is running off two watts.

*You can run them on sunlight?*

The big Canberra glassworks project we won (and are about to start working on) is a high glass and light structure and its running off less power than is drawn by your household kettle. So one of the options is solar power, which is appealing. Once the project gets under way, we might look at whether we can find someone that wants to sponsor that aspect.

*You've taken an approach and grown it organically.*

In every case it's about lateral thinking. It's also somehow taps into that vaguely scientific way I think. I know how to test ideas and eliminate options and plans. I'm forever thinking about how you can extend it, or push it, or change it to make it a more viable object. That was always the same with my glass. All of my glass stuff used really cheap technology driven by the fact that I'm a cheapskate by heart and I was trying to live off my studio.

*The best sort of problem solving.*

It is. Necessity is the mother of invention. When we decided that sand was the option for the big kiln beds, it was much nicer than a seven thousand dollar piece of stainless steel that was going to warp anyway and was only going to be good for two firings. There was sand, and it was free. We took a lot of low budget options.

It's more about trying to create vehicles for my ideas. Because I'm vaguely hyperactive, it was always about not having the time to spend two weeks making a mould and drying it out. I wanted something where I could go home, have the idea that night and have the whole piece finished in forty-eight hours.

That sums up my approach to the materials, to the technology and the process. It's all about having a vehicle enabling you to get the idea out there quickly, to maintain creative spontaneity.

*You haven't forsaken the tangible object?*

No, it's still there.

*You've talked about symbols. Do you have a 'language'?*

Yes, the recurring image of the vessel. That's always there. I also think there's a graphic element to the style. I'm not really that concerned with 'pretty'. My exhibition work was never a big seller. A sale was always a plus. It was all a bit confrontational. I think the American collectors in particular like it to be shiny and polished and beautiful. They had a lot of trouble with my work.

I'm a bit intimidated by technology. Once I get my head around it, I embrace it, I come to it, but I don't go looking for it. The greatest thing that has happened to me is the assistant that I've had for the last two or three years. Trent Baker, a highly qualified industrial designer who is quite extraordinary and he covers a lot of the specific technologies we are using. His enthusiasm and skill base is part of the reason we're winning a lot of these project competitions these days – a very professional graphics base to lots of our submissions. We have fly-bys, walk-throughs, day and night renderings and the like.

*Detail?*

To the extreme. I suggested to Keith [Rowe] and the conference organisers that none of the glass conferences are really addressing glass in architecture and specifically the nuts and bolts of submitting and competing for these large projects. This has got to be one of its most exciting areas of glass application. Everybody is desperate to survive and one great way to survive is to win a big architectural project. Last year the closest thing we had was when Vaughn and Lindsay (at the conference in Hobart) talked about getting a grant to investigate glass in architecture and gave us an overview of their travels in Europe, where they visited a few studio owners. It didn't really address how you compete for these projects, where you find them and most specifically the issues involved in working to this scale (engineering, installation and the like). I'd be happy to talk about these things and I think it would be really beneficial to many of the members.

It's a natural step for people working in the studio and wishing they could take it to a bigger scale, but you don't get to take it to a bigger scale until you're given the opportunity. You don't do it on 'spec'.

It's a really important area that never seems to get addressed at conferences. They throw a token address at it like they did last year, but no one learnt from that how they could apply for those jobs, or take that next step. Because I don't have any secrets and I am well established, it is not going to threaten me to tell people what they need to do to win these projects (even though they may end up competing against me).

*You're talking about public spaces?*

Yes, art in public spaces and what you have to do to win these projects. It is all about 'the application'. When every 'expression of interest' calls on you to submit ten slides of previous works, how do you get those 'previous works' to get to the shortlist? The client will want to see a portfolio of works that you have done in the built environment so they can access whether you are appropriate to be short-listed for the job. That can be like 'which comes first, the chicken or the egg?'

*Your 'light works' would not have been suitable for gallery sales.*

I had an exhibition last year (the first one for many years) at the Australian Galleries. They were all gallery scale objects in light. Some were quite big, but could translate from the gallery wall or floor and placed somewhere else.

*'Neon' has been around for a long time.*

Yes, a long time, I find the illuminated neon word on the gallery wall perfectly tedious, but these works were different to that. They were works for more intimate spaces and best described as "paintings" in light. With the show in Sydney, selling any of them was a plus. They were largely done to show people possibilities. Again, it was really lateral, often low budget stuff. Just by putting a \$1.30 lens in front of LEDs could transform the whole effect. There were projections onto the walls that were effectively 'light paintings'. You don't necessarily need to have a painting with a frame around it. I'm working with LED configurations placed in your ceiling that project onto your wall and turn the entire wall into a 'light painting'.

These particular works didn't move, pulse, or go through colour shifts. They used the simple fact that a red LED makes a pure red light, a blue LED makes a pure blue light, so they mix like paint. You cross the beams and you will go through every transition. They are truly paintings in light.

We did a fifty-meter pedestrian tunnel in Doncaster, Melbourne the year before last. It was a graffiti proof artwork. There were a thousand LEDs, each one with a tiny lens in front of it turning that light into a linear beam, or a 34-degree lens, or a 45-degree lens. They had been set up on small armatures so they could be replaced without changing anything, but it mixes the light to create a sense of a huge Impressionist painting. It is a permanent fixture in the freeway pedestrian underpass. Small-scale versions of that could be done in a domestic situation. Instead of hanging a painting we would be commissioned to come and make a painting of that wall.

*You could use any natural force (breeze, changing light) to energise that and take the qualities of glass – its ambiguity and shifting form – across into a whole environment.*

We have spent the last year researching is this notion of 'real-time effects' and that is exactly what you are describing. In particular we are looking at taking a 'real time effect' that is happening out there and transferring it to some equivalent affect in the 'artwork'. We have pitched it for two big projects now and in neither case did it get up. It takes really simple technology like a CCTV camera and we extract two things from that, movement and brightness and that digital information gets transferred through solid state units (no fans or globes) and it causes an equivalent response in the artwork.

One we were looking at recently was for a site on the Yarra in Melbourne. It was simply a CCTV camera focussed on the surface of the Yarra that recorded every ripple from every passing boat, every cloud that moved across, every change in the season, and it converted that information into the artwork, so that every time you went past the artwork it was different. In so doing, it ties you into the site around you. As workers walked by in the morning it may have a predominantly blue blush, but when they looked out at morning teatime the whole thing had transformed into an orange-gold colour because a cloud had just come over, or because the sun is at a different angle. That is a very 'glassy' thing.

You don't have to know what it is. You are responding to it as if it were a piece of glass. It is doing exactly what the glass would do of its own volition.