

PRE-FABRICATED MAN



Many architects have sought to introduce alternative housing to the brick, timber and fibro-sheet which dot and merge like printer's ink to fill the picture of our urban landscape. Imaginative, economical and easily assembled housing is the goal for a new generation of young architects ambitious to inscribe their mark.

Thirty-three-year old Sydney architect Ed Lippmann is in the vanguard of change to re-orientate perceptions and expectations of housing and industry.

The idea that workplace and home are somehow irreconcilably at odds is challenged forcibly by Lippmann.

It was largely left until the mid-1960s when English architects Richard Rogers and Norman Foster, among others, resuscitated many of the Bauhaus ideals of industry. Industry art and craft were given the pure oxygen of imagination underpinned by technology.

The Maison de Verre by Pierre Chareau 1932, Charles Eames House 1949 and Philip Johnson House 1949 are critical in the evolution of the Modernist House.

These houses celebrate the spirit of the age. Their exuberance yet adaptation of inexpensive, commonplace materials signposted the way for future generations of architects and engineers.

Ed Lippmann has designed numerous pre-fabricated houses, extensions and renovations in Sydney's inner-city. Lippmann, a former employee of Bauhaus champion Marcel Breuer in New York talks with Steel Profile editor Peter Hyatt about his architecture of pre-fabrication and domesticated industrial forms:

Peter Hyatt: How do you lead a client through a project on a purely design level?

Ed Lippmann: I don't talk to clients about the architectural imagery. I prefer to speak about what is pragmatic, sensible and reasonable. Clients are generally not enthralled by architectural discourse.

PH: With your new office/warehouse design at Port Botany how did you convince your client that such a highly pre-fabricated, plug-in system would succeed?

EL: What impressed them most was that we had the answers and we knew how to deliver those answers within a specific cost. Beyond that we explained that the cheapest way was not necessarily the best way in the long run. What we've produced is an exposed steel frame with lightweight precast concrete floor and wall panels systems, windows and even toilet modules which are literally plugged-in.

PH: How difficult or desirable is it to get a client absorbed in the architectural vision?

EL: In most cases, especially domestic work, clients are less hard-headed than commercial ones so it's not a purely mechanical process. I'm building houses for people who listen to me as I listen to them. For that reason they feel comfortable about giving me a free hand.

PH: You describe your design approach as "rational" yet it is clearly far from accepted practice.

EL: When designing, I tend to come up with a building structure fairly early in the piece which is sensible and rational. I then consider the way the space can be accommodated within that. Some architects look at space first and how to build later. Of course it's never that simple, but developing a system approach is an important aspect of my philosophy.

PH: Does it concern you to be regarded as taking an "oddball" approach to design?

EL: I don't see it that way. I find that a building and structural system which is suited to a particular purpose and site produces the freedom to develop an interior which is flexible and visually exciting. So I don't see this approach as a straitjacket or one which creates inhibitions, but rather greater freedom.

PH: Is the decision to design so extensively in steel driven purely by space-making?

EL: The whole rationale in building with steel is that you can open up spaces and achieve longer spans which in turn create great flexibility for internal planning.

PH: To the extent of accommodating structural change at a later date?

EL: Architects have a tendency to ban any modification to an original, pristine form. I can appreciate that, yet I'm interested in an architecture which is more open-ended and can be adapted to change in use. This can produce a dilemma, but as long as the changes are sensitive to the original design, expansion and modification can be successful.

PH: How receptive is the market for design which is intellectually rigorous and expresses a relatively industrial aesthetic.

EL: A lot of my current domestic work comes from people who like my work. Five years ago when I began practice, disagreements often arose which led me to give away some of those projects. Now this happens very rarely. Developing structural systems with a strong expression has become the signature of my approach and my clients want that.

PH: Many people see that paring of structure as too reductive and subtractive to the point that it is ultimately boring.

EL: It certainly doesn't have to be. Richard Rogers and Norman Foster for example, demonstrate the complexity and elegance that can be achieved with an economy of structure. Marcel Breuer produced a film-strip at the Bauhaus which showed the development of chair design from heavy,

Details of Exchange Hotel.
Raw, industrial, components sculpted
into a vigorous aesthetic.





traditional timber chairs, to tubular steel chairs of the '20s to the ultimate futuristic image of a person reclining on an invisible support. There's been a gradual evolution leading towards lighter materials in architecture – doing more with less. I am fascinated by Archigram's vision of warm air curtains completely replacing physical building fabric.

PH: If we remove too much perhaps we take away some of the opportunity for human experience.

EL: I think it's really a question of what we come to expect. It's interesting to discover where our preconceptions come from – usually from social conditioning, where what we've seen or been taught is regarded as good or normal. I work with people who are willing to be a little more experimental. Perhaps Sydney people enjoy being a little more adventurous and take a few more risks. Perhaps it's become a mark of status that is particular to this town.

PH: Surely the profession has a wider role than to exhibit its capacity for cleverness of invention.

EL: Well I do believe we have a duty to develop our art and understand current technology. At the same time we can't be divorced from human needs and emotions. I think that any good architect will naturally take those issues on board because ultimately we are designing for people.

PH: Is each project a journey, an exploration, or a mere adjustment of a building system?

EL: I don't expect every project to answer ultimate truths but there is always development which comes about by testing ideas and providing answers to technical, as well as human, issues.

PH: Do you prefer to keep the risk-taking process of creativity under-wraps and not advise your client of experimentation?

EL: Well I always try to keep a client's confidence if possible. Some of our decisions might be pushing things that we haven't done before so I wouldn't be telling

the client that we were entering uncharted waters. Similarly I would not attempt something that was not within my ability to get right.

PH: Who would you acknowledge to be a major influence on your work?

EL: I wrote my thesis on High-Tech Architecture, so Rogers and Foster, they were very influential. I had just returned from Marcel Breuer's office in New York which brought me very close to the great Modernist tradition.

PH: To what extent are we stepping back in time looking to pre-fabrication as a means of producing highly affordable housing?

EL: Architects have been attempting this sort of thing since the '20s and '30s so it is not new. But there is a philosophy which underpins this kind of work. Archigram followed a similar line in the '60s which was a belief that we could create a world where class distinctions would disappear and freedom of choice would predominate. It was a utopian vision. The houses I design are not monumental, bourgeois objects. They are buildings for anyone and the principles standardisation and pre-fabrication lend themselves to that.

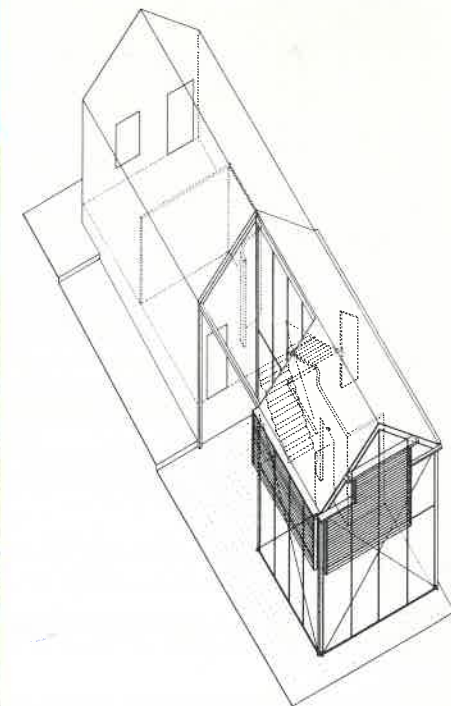
PH: So the fundamental appearance of a house for a client with limited funds, by definition should not appear radically different from that of a client where cost is no object?

EL: The precepts would not be any different. Naturally one house might be bigger, or have more durable finishes, but there would not be the differences found in architecture which does everything possible to highlight the status of its owners. Ostentation in any form, I find rather poor taste.

PH: How did the Retallack House evolve?

EL: We decided to split the house in two. Cut-off the back half of the house and add a small pavilion that would reflect the form of the original section of the house.

Retallack House: "In one sense it was a compromise, in another, it created a strong contrast – practically schizophrenia – between the traditional and uncompromisingly modern." Ed Lippmann.



Leitch House. "I would like to think that the houses I design are not monumental, bourgeois objects. They are buildings for anyone and the idea of pre-fabrication lends itself to that." Ed Lippmann.



Many early projects like the Retallack House involved adding onto structure. In one sense it was a compromise, in another, it created a strong contrast - practically schizophrenia - between the traditional and uncompromisingly modern. That contrast in materials, structure and space was exciting without being antagonistic.

PH: Domestic design work can be intensely personal and complicated with never-ending squabbles that drive some architects into premature retirement. What has been your experience?

EL: If there isn't an empathy at the outset there usually isn't one at the end. A different combination of architect and client is probably the best solution. The right chemistry between the two produces wonderful results which would not have surfaced if the two worked in isolation. Sometimes that collaboration can be really satisfying and challenging.

PH: Where do you see your architecture heading?

EL: I seem to be getting increasingly into commercial and industrial projects which I guess is inevitable. I am not interested in specialising in any one type of building because I still enjoy designing houses and even furniture. Clients of our domestic work are very excited about that aspect of our work. Nevertheless bigger projects do provide greater scope.

PH: The production-line of pre-fabrication obviously need not stifle creativity yet in architecture and engineering it seems to make some people very edgy.

EL: I've found that the less site-based construction activity the better. I think that building sites crammed with manual labourers involved in wet trades will gradually become a thing of the past.

Factory production and pre-fabrication generally leads to an improvement in quality and speed of erection as long as you have the right contractors.

PH: How difficult has it been to discover the right contractors?

EL: We tend to use the same people all the time. There's two or three steel fabricators we use consistently, so we have found it far preferable to use specialist skills.

PH: How do you ensure the best sub-contractor is assigned the appropriate job?

EL: At the moment we're putting together an office manual where we're going back over a lot of old projects and getting specific names of people who helped us with particular detailing so we know exactly where to go. In housing you need that sort of meticulous detailing which is only possible with the right people. We are also recording the names of suppliers of off-the-shelf components and fittings. That kind of organisation is important.

PH: Are there drawbacks to doing this kind of design?

EL: Absolutely. You simply can't cover up mistakes. If a frame isn't plumb level then you will get cracked tiles or kitchen benches that are out of parallel with ceilings so it is critical to get it right at the start.

PH: What remains the main attraction of steel?

EL: As everyone knows it is relatively light. It allows large spans and is a very dynamic material. Steel buildings have a very different dynamic to brick and of course pre-fabrication demands a totally different approach in design. In other domestic work we've used castellated beams and trusses and all sorts of detail which I find very exciting. I'm interested in structural engineering as well, so it gives me the opportunity of working very closely with engineers who have a penchant for that sort of work.

Port Botany office/warehouse
 - the speed and precision of pre-fabrication.

PH: Is that now the main challenge of technology – making it more accessible, more user-friendly and responsive?

EL: Breuer and others talked about humanising technology and that's a critical part of the whole exercise. Technology and humanity need not be at odds as some people believe. The reason for developing technology is to improve our environment and quality of life. I believe that architects should respond to this issue rather than escaping into the past.

PH: How easy is it to work with clients who bring with them the very heavy baggage of preconception?

EL: Persuasion and putting ideas into action is part of the design process. If the client simply says "I want . . . I want . . ." and never really listens then I would have to say no.

PH: So by definition to do good architecture you have to say no?

EL: That's right. You can't have a philosophy if you don't practise what you preach. Of course it is a lot more difficult to say no with a mortgage and huge running costs hanging over your head. Fortunately it hasn't become a real issue with me yet and the few jobs that I have had to turn away have not forced me anywhere near the breadline.



Photography: John Gollings
 Peter Hyatt
 Ed Lippmann

