Switching Hats: From Accessibility to Possibility

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RESEARCH

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Abstract

Neil is a sporty, outdoorsy sort of bloke. He spends very little time at home, preferring to golf, surf, go to the footy and hang out with his mates: You can tell just by looking inside his house—a huge TV in the darkened lounge, and golf equipment, surfboards and motorbike gear fill up the room. That was before last October. Now, in June, Neil is a paraplegic, his house is inaccessible and his boys-toys are in the way.

For Neil, his home, previously an inwardly focused place to sleep and store, will become the centre of his world (when he can eventually get into it). Initially, accessibility is the key problem to be solved. To this end the architectural advisor from the rehabilitation unit proposed formulaic adjustments to the bathroom to allow for wheelchair access. However, accessibility is only one facet of the problem. This environment, relatively unimportant before, now needs to enable and inspire the occupant both physically and emotionally. As physical abilities dramatically change the spatial practices of everyday life also change. The home environment is ever more important to support and help heal emotional scarring after a life-changing event.

In the context of shorter hospital and rehabilitation stays, the home provides a vital extension to the healthcare system. Therefore it is important that architectural advice given to enable this move considers the holistic qualities of design thinking rather than be restricted to short-term solutions.

Introduction

This discussion paper explores applied design thinking as a progressive rather than linear process, and proposes that this method can be used to address current logical problems, such as accessibility, as well as the future possibilities of the environment. Neil's modest 1960's Perth home is critically examined and documented through architectural diagramming and drawing. Significant changes are proposed to allow for "perception, possibility and practicality."[1]

The relationship between medicine and space has had a fractured history, particularly in hospital planning, but is relatively absent in standard residential developments. In *Medicine by Design* Annmarie Adams summarises:

> While architectural education frequently draws on precedents and case studies, modern medicine invests in a notion of progress that looks forward, rather than back. […]. Architecture and medicine thus differ in significant ways. When the fields intersect, we gain knowledge of both disciplines. When they collide, architecture is mute. [2]

It is not good enough to send patients to recover, to rehabilitate or, increasingly, to die at home without considering the spatial situation of the home. Design practice needs to step up to intersect with health practice through the application of design thinking methods.

This paper uses a current residential design project to discuss the impact that design thinking can have on the spatial possibilities for a newly wheelchair-bound patient/client. In this instance, architectural drawings provide a powerful visualisation tool for the client to imagine a positive living scenario for the future. This study aims to highlight the relationship between design thinking and the ability to visualise a positive future. Just as, conversely, negative thinking can suppress the space of hope and dreams. In *The Poetics of Space,* philosopher Gaston Bachelard describes the link between the notion of home and the space for dreaming.

> The house we were born in is more than an embodiment of home; it is also an embodiment of dreams. Each one of its nooks and corners was a resting-place for daydreaming. And often the resting place particularized the daydream. Our habits of a particular daydream were acquired there. [3]

Conversely, a final home, one with no future dreams, can be a depressing place:

> Maybe it is a good thing for us to keep a few dreams of a house that we shall live in later, always later, so much later, in fact, that we shall not have time to achieve it. For a house that was final, one that stood in symmetrical relation to the house we were born in, would lead to thoughts—serious, sad thoughts—and not to dreams. It is better to live in a state of impermanence than in one of finality. [4]

A negative visualisation of place, such as those associated with hospitals, rehabilitation units and dependant nursing homes, is detrimental to the notion of hope. It is widely known that place and identity are deeply connected concepts—where we are born, where we live and where we die form key descriptors in people's identity. Home is symbolic of who we are, our taste, our family structure, our hobbies, our busy life-style. Place-identity theory is never more apparent than with the general assumption that a 'disabled' person needs a 'disabled' house.

Background

The design project started out as a relatively simple architectural task: to make an inaccessible house wheelchair-accessible. The house, a solid 1960's project home, is dark, pokey and bound by a long narrow central corridor. The toilet, bathroom, laundry and kitchen are all unusable from a wheelchair. In fact, the whole 750 square metre block from front lawn to back fence is totally inaccessible. The long grass sits like an incarcerating moat surrounding the house (figure 1). It became obvious to the participants, the client and family carers, that solving the problem of toilet and bathroom access was not nearly enough. Dissatisfied with the $5000 government offer to gut and re-equip the bathroom similar to a hospital disabled bathroom the clients looked for a second opinion.

The 'second opinion', proposed by the researcher, attempted to take a holistic view of the client's situation in response to his previous life-style, his current house and his possible future scenarios. The scenario of hosting a wheelchair basketball team wind-up was not ruled out. This mode of design thinking required future positive projection rather than identifying and solving existing negative difficulties.

Initially the scheme called for minor alterations and improvements to the existing house. Then, following a generous offer from the Construction Workers Union, a new house on the same block of land was considered. This led to even more possible scenarios—a family home, a share house, a rental property or a house and land subdivision. The notion of accessibility had become implicit in the scenarios and was no longer a driving concept.

The following section shows diagrammatically the progressive design-thinking process used in preparing the design solutions. In doing so, the generalisations and assumptions associated with accessible or universal healthcare design are challenged.

Methods

> For design thinking, possibility is essential. Logical thinking likes to work with facts. Design thinking has to work with perception. The three most important things in design thinking are: perception, possibility, and practicality. [5]

This study uses Edward De Bono's framework from his seminal psychology book, *Six Thinking Hats,* as an alternate means to demonstrate design thinking as a progressive rather than linear process. In this section each 'thinking hat' is used to diagram an individual stage of the architectural design process. De Bono explains the problem with traditional thinking methods:

> The main difficulty with thinking is confusion. We try to do too much at once. Emotions, information, logic, hope and creativity all crowd in on us. It is like juggling with too many balls. [6]

The Six Hats Method simply proposes that the thinker deals with one thing at a time so that "emotion is separated from logic, creativity from information." In this way each mode of thinking has a valuable contribution to make to the final result.

For the purposes of this study each coloured hat is first generalised within De Bono's framework and then interpreted within the process of architectural design strategies. Briefly explained, the white hat—the factual, rational and neutral thinking mode—is representative of the given or existing site situation. The black hat—the critical, logical and cautious thinking mode—seeks to highlight the problems of the situation. The red hat—the emotional, aesthetic and poetic thinking mode—identifies the desires of the senses. The yellow hat—the positive, constructive and optimistic thinking mode—looks for the possibilities of hope and dreams. The green hat—the creative thinking mode—proposes new ideas and propositions for the situation. Finally, the blue hat—the control or organising thinking mode—brings together the collection to form a new situation or design strategy.
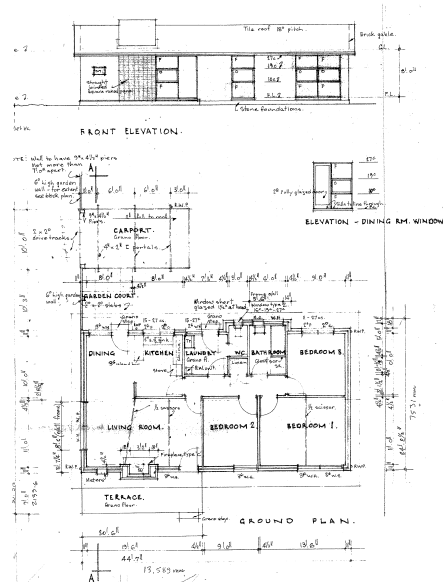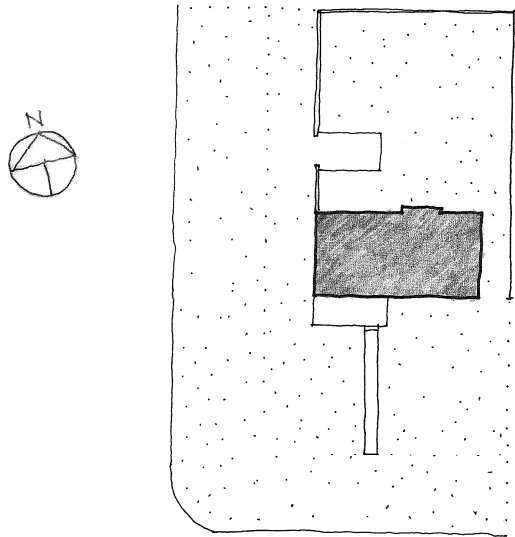
Figure 1a & b: White Hat—factual, rational and neutral—existing site situation.
1   a small house in the middle of lawn and verge.
2   a solidly-build adaptable house.
3   a large subdivisible block.
4   good neighbours.

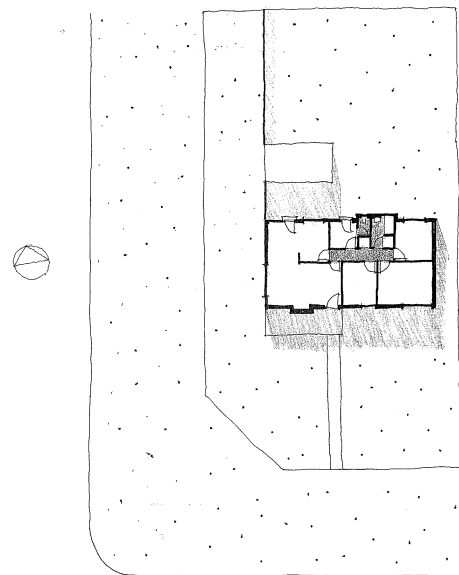[Figure 1a is based on a Google map image]

Figure 2a & b: Black hat—critical, logical and cautious—problem statement.
1   inaccessible house: bathroom, toilet, kitchen, bedroom, carport.
2   inaccessible soft landscape: no access to house, no use for garden.
3   poor orientation: no northern sunlight to house, no thermal delight, no sunny outside sitting area.
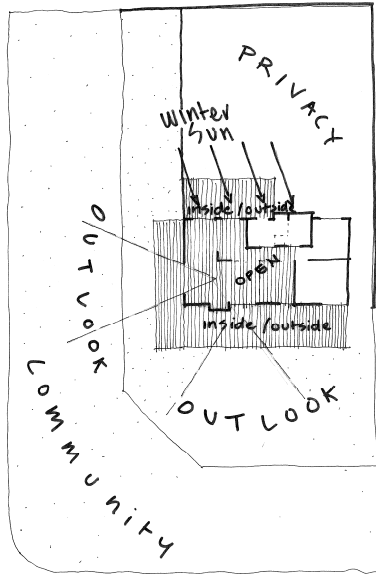4   poor outlook: no view to outside, no prospect, no connection to community.

Figure 3: Red hat—emotional, aesthetic and poetic—desires of the senses. Perceptions:

1   hopeful: sunny, bright, warm.
2   quiet: private and contemplative.
3   lively: connected to community.
4   welcoming: spacious and friendly.

Figure 5: Green hat—creative approach—propositions:

1   proposes a sustainable approach to development.
2   proposes a courtyard house to maximise north light and garden connection, providing a central focus.
3   proposes verandas be re-orientated to connect to the street.
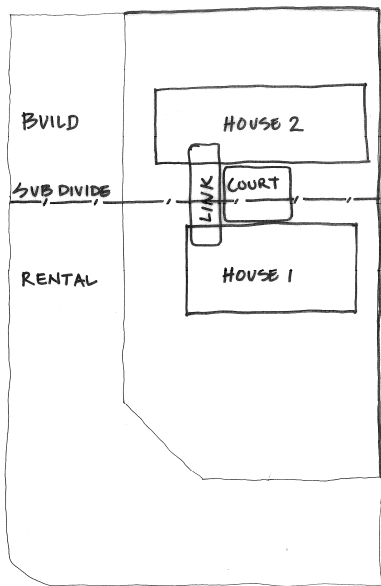4   proposes decking and hard landscaping to fully utilise outdoors areas.

Figure 4: Yellow hat—positive, constructive and optimistic—hope and dreams. Possibilities:

1   possibly a large home with flexible use.
2   possibly a rental income: a sustainable development of 2 houses.
3   possibly a nest egg: for future subdivision decisions.
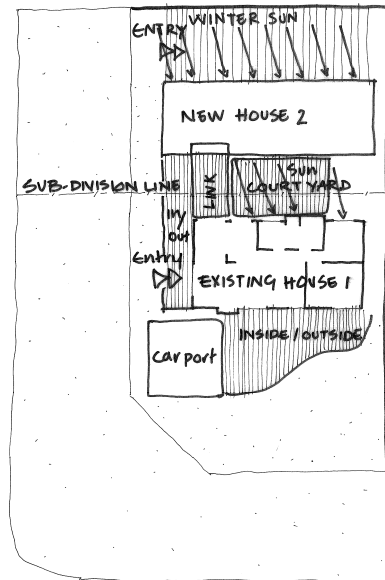4   possibly a share house: creating a community.
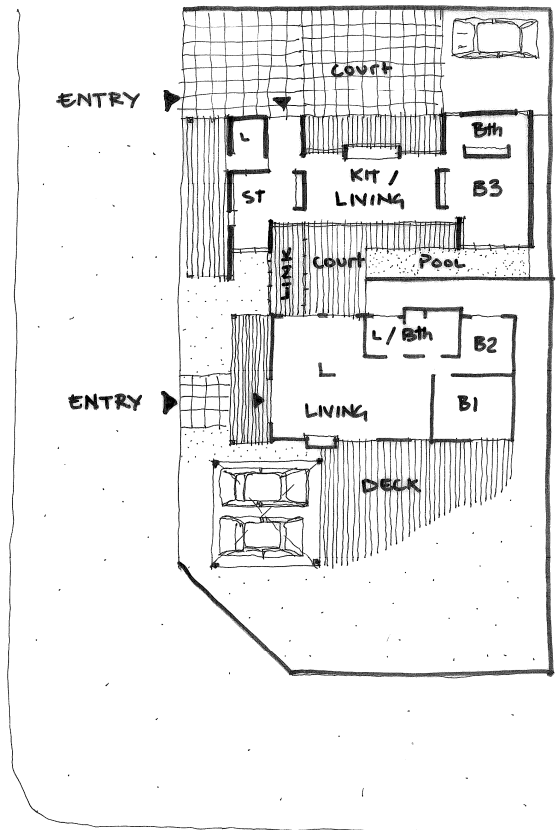

Figure 6: Blue hat—control or organising—overall design strategy.
Final sketch design drawing.

Results and Discussion

As this project is still in the documentation phase, the final outcome of living in the actual spaces described by the drawings is not available. However, what has been interesting is the unexpected reaction of the clients to the virtual spaces imagined in the architectural sketches. Rather than just a solution to an accessibility issue, the drawings have become a visualisation tool for future possibilities. From the presentation of the initial disabled bathroom drawings to the sketches of the double house solution, the client and carers have been on a journey of discovery. Part of that journey exposed the clients and carers to the different method of design thinking.

Scenario planning, in particular, helped the clients and carers to visualise through the familiar spaces of home how a new way of living could be carved out. This mode involved a concerted yellow-hat effort and the temporary removal of the problem-finding black hat. The green and yellow hat modes combine to present both possibility and proposition. Possibilities, previously unconsidered, were discussed and planned for: a big party, a new family, an independent life. Even unbuilt, the sketches offer hope. So much so that the client is now proposing to be the project manager of the construction phase from his wheelchair: and why not?

Conclusion

With our aging population and subsequent increased pressures on the healthcare sector, hospitalisation and rehabilitation stays are becoming shorter. Home and family are being called upon to act as informal hospital and informal carer. So, just as the specialist nurse is being supplemented by the untrained family carer, the designed hospital environment is being supplemented, and in some cases replaced, by mainstream project-built houses. If this health policy is to continue and succeed, this study suggests positive outcomes can be achieved through a re-alignment within the architectural profession and within the government funding to invest in the small-scale adaptation of existing homes and in the development of future housing.

Architecture is often described as a problem-solving profession. However solving the problem is only the beginning of the process. The fundamental bottom line is that the design must practically address the problem and answer the brief. But good design ought to do much more than that and provide poetic and spatial qualities not necessarily explicit in the brief. In other words, design and design thinking should value-add as well as solve the problem. One of the prime difficulties in achieving value-add designs comes from the architectural profession itself. The majority of people live in project-built houses that the have little architectural input. Architecture is a profession generally associated with high-end residential projects with large budgets and prestigious sites. It is unfortunate that the investment in design thinking is not more widely understood and more evenly distributed to where it is most needed. It is time for partnerships to be built between innovative architectural practitioners, research academics and the community. In this way the practice of architecture can work alongside research to serve an important community need.

Reference

[1] De Bono E: *New Thinking for the New Millennium.*

Beverly Hills, California: New Millennium Press; 2000, p.

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p. 130.

[3] Bachelard G: *The Poetics of Space.* Trans. Jolas M.

Boston: Beacon Press; 1969, p. 15.

[4] Bachelard G: *The Poetics of Space,* p 61.

[5] De Bono E: *New Thinking for the New Millennium,* p. 222.

[6] De Bono E: *Six Thinking Hats.* Camberwell, Vic: Penguin; 2008, p. xi.

PEER REVIEW

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CONFLICTS OF INTEREST

There are no competing interests to be declared by the author