



FUNCTIONAL INTERIORS

Modernist Architecture within the context of Human-Centric Design disciplines :
 Experiencing the 'Case Study Houses' - California 1945-1966



Research Question :

Modernist Architecture prescribed that 'form should follow function'; but does function include the actual experience of space at the domestic scale?
 An investigation of the experiential potential of the Modern Interiors as captured in Julius Shulman's photographs of the Case Study Houses - California 1945-1966

* It is important to note the difference between the terminology i will be using when referring to 'Modernism' and 'Modern' -

the term 'Modern' i will use when referring to something new or in trend as it is often used with connotations for something "of today" or "up to date," or related to the present times. That of 'Modernism' i will use as an ideological movement between approx 1890-1970 that was characterised by trends in the creative fields, change of societal opinions and technological breakthroughs, rejecting the traditionalist views of the world around us. To be described as 'Modernist' is to be directly associated with 'Modernism'.



Figure 2: Living room of Eames House, Case Study House No. 8 (Los Angeles, Calif.), featuring Charles Eames and Ray Eames, and their custom made furniture, (Shulman, 1949)

This dissertation intends to take the reader on a journey through select modern interiors which explore the ideas proposed by the Bauhaus, and pioneering modernist architects Le Corbusier and Frank Lloyd Wright. We will experience the domestic scale through the 'Case Study Houses' program of California 1945-1966; a prototype project for modern family living, developed in the peak of the modernist movement. These ideas will be illustrated in the design of the 'Case Study Houses', through the images that architectural photographer Julius Shulman took to contextualise and humanise the modernist ideas. The photographs of Shulman will become a measuring tool for human experience within the final designs; as a method of secondary source research. The 'Case Study Houses', through their representation, will provide evidence of how the architects managed to creatively respond to the unique design requirements provided by the clients (post-war families in Southern California); concerning practicality, efficiency of space, views, privacy, comfort, affordability and low maintenance cost. The context of the 'Case Study House' program set a real opportunity to design for the people, with the 'human in mind'; the architects took on the challenge of designing each house specific to its users (working class families) and innovatively responding to the challenges set by the location (the hills of California).

Parallel to establishing the modernist design methods and ideas, the paradigm of Human-centric design (HCD) will be introduced as a critical methodology, against which standards I intend to evaluate the success of the domestic design of the Case Study Houses in relation to its occupation captured in the photographs of Julius Shulman. Shulman had an impressive career spanning over 4 decades 1936-1986, all of which centered in his home city California. Shulman is now considered "the world's most influential architectural photographer" of the 20th century, most famously because of his ability to capture 'human occupancy' within interiors. Shulman's photographs will be referenced throughout to analyse the human occupancy and check for HCD features. HCD evolved in the early-1980s to highlight the importance of understanding deeply users' behaviours, desires, and needs; whilst trying to maximise the built environment with those in mind. In addition, the field of Interior Architecture will help my evaluation of the interior, due to its nature as a discipline focused on designing at the human scale, with already established clear guidelines to what a successful interior provides.

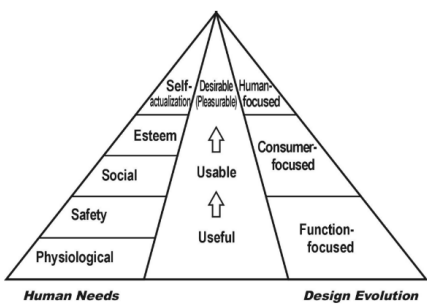


Figure 20 : A conceptual model of human-centred design

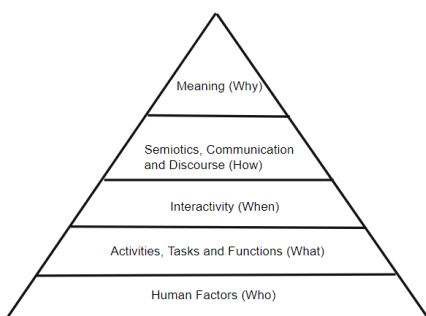


Figure 21: The human-centred design pyramid, (Giacomin, 2014)

TECHNOLOGY	Radical Change	Technology-Push Innovation	Technology Epiphanies
	Incremental Change	Market-Pull Innovation (Human-Centered Design)	Meaning-Driven Innovation
		Incremental Change	Radical Change
		MEANING	

Figure 28: HCD matrix for innovation, Donald Norman and Roberto Verganti 2012

In architecture, spaces (interiors) should enable its occupants to function at their highest level physically and mentally, whilst covering all the other characteristics such as sensory comfort, physical comfort, opportunity for socialisation, safety, and necessities such as shelter and health. HCD narrowed down ten main strategies to encourage user self-actualisation in space through: flexibility, balancing community and solitude, providing element of surprise, transparency, visual access, sensory cues, connection to nature, diverse shapes, acoustic and light control, colour and texture. "Today's human centred design is based on the use of techniques which communicate, interact, empathise and stimulate the people involved, obtaining an understanding of their needs, desires and experiences which often transcends that which the people themselves actually realised. Practised in its most basic form, human centred design leads to products, systems and services which are physically, perceptually, cognitively and emotionally intuitive." (Giacomin, 2014)

Approaching design briefs with the end-user at the centre of decision making; and ensuring that both social affordance and atmospheric qualities are considered carefully, has proved to be a necessary approach in responding to the challenges facing contemporary build environments and the field of architecture.

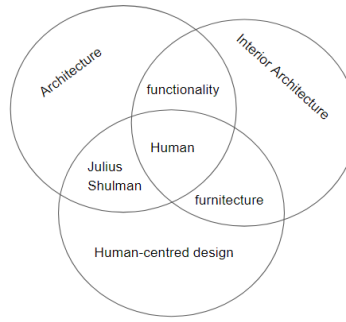


Figure 3 : Authors own - Venn Diagram outlining topics discussed in this dissertation

"People are so adaptable that they are capable of shouldering the entire burden of accommodation to an artifact, but skillful designers make large parts of this burden vanish by adapting the artifact to the users"

- Donald Norman

'Human-centric design' (HCD) disciplines emerged towards the end of the 20th century to formulate a "processes which answer an incremental set of questions regarding the relationships which are established between the design artefact and the people" (Giacomin, 2014). Interior architects' have adopted a HCD approach to design which has resulted in the use of 'furniture' as a tool when thinking about the relationship between the architecture and the human body. "Interior Architecture researches and defines the design specifications necessary to achieve meaningful and inspirational spaces at all scales..."addressing the wellbeing and satisfaction of the end-users" (Placidi, 2022).

Furniture

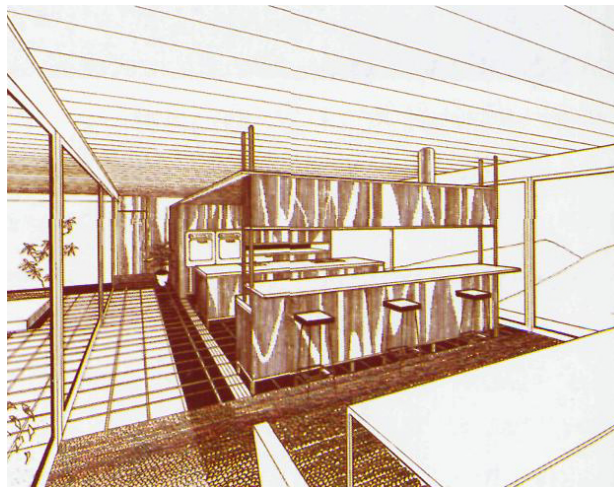


Figure 24: drawing of kitchen freestanding unit in the Stahl House(Koenig, 1960)



Figure 55 Authors own collage of Park Hill Sheffield rebuild



The ambition behind the development of the 'Case Study Houses' (CSH) program in 1945 was to provide affordable housing for the post war modern American family, whilst designing for each client/human specifically considering their unique requirement and desires. The model of family life and domesticity is arguably the most difficult design brief as not every house would have the potential to become a home. The architects design is fully tested when the people attempt to establish a connection with the architecture to form a place that enables them to experience the space to its very fullest. In the following chapters we will explore exactly this concept to test the modernist design of the Case Study Houses relative to the experience of its inhabitants in mind. The only remaining evidence for majority of the houses in their original form of inhibition, remains in the collection formed by photographer Julius Shulman who was present capturing the CSH development 1945-1966. The select Case Study Houses i have selected to analyse in close detail have managed to represent most fully the spirit of the program with ambitious experimentation with material, great social impact of design, and unique attempt to control the interior experience of the houses through flexible interventions.

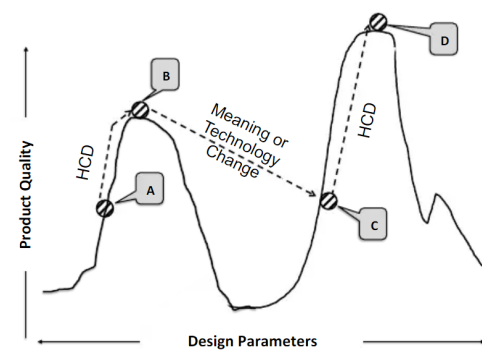


Figure 27: The hill-climbing paradigm applied to incremental and radical innovation. Donald Norman and Roberto Verganti 2012

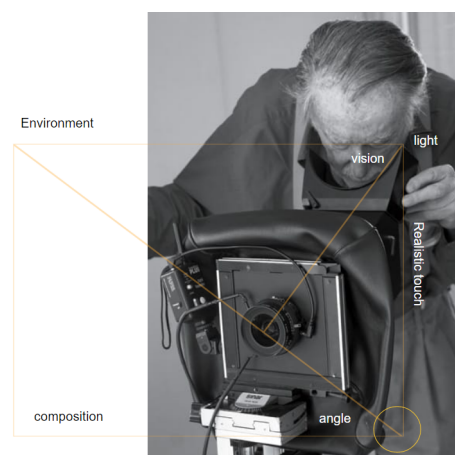


Figure 37: Authors own collage of Julius Shulman and his work process what goes behind the camera



Figure 38: 'Stahl House' Case Study House No. 22 (Los Angeles, Calif.) (Shulman, 1960) experienced in black and white overlooking the lights of Los Angeles.

In 1945 Julius Shulman was tasked on documenting the interiors of the Case Study Houses program. Shulman is now considered "the world's most influential architectural photographer" of the 20th century, most famously because of his ability to capture 'human occupancy' within interiors. His photographs had the power of popularising the ideas of the modernist vision for family living internationally. Shulman worked in colour but favoured black and white imagery when documenting the human occupancy of the interior, particularly as the monochrome had the ability to give the viewer intimacy with the space and the subject "when you photograph people in colour, you photograph their clothes. But when you photograph people in black and white, you photograph their souls" (Grant, n/a).

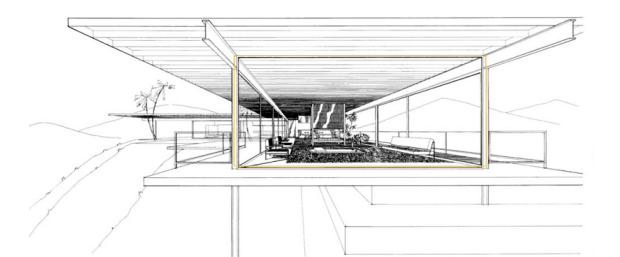


Figure 42: perspective drawing of Case Study House No. 22 (Los Angeles, Calif.) (Koenig, 1960)