

Keynote – Monday, 4th July - ICAD 2016

A Design-led Approach:

Opening up a cross-disciplinary discourse into design research

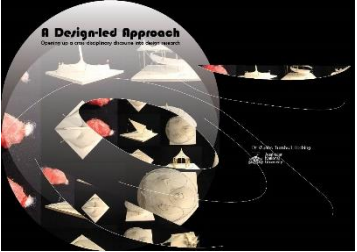

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Abstract

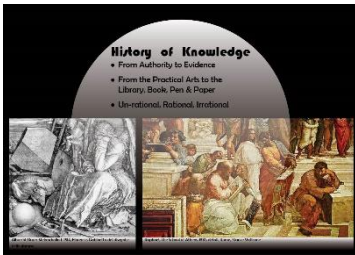
Design as a profession emerged out of the industrial revolution. However, the word 'design' has been around much longer and describes an activity that we as humans all do and have done for some time. A clear distinction can be made between uppercase 'Design' as the profession versus lowercase 'design' as the activity in order to highlight the many uses, meanings and applications of the activity of design independent of the fields of Design. Although design may have many forms there is an overriding commonality in a process concerned primarily with generating 'what could be' rather than 'what is', of which the discipline of Design and our approaches can contribute. This key note address aims to initiate a conversation about the value of Design approaches to the research community and the multi-disciplinary area of sonic information design. To enable such a dialogue this address offers some insights into the characteristics of design: what it is, how it is done and why it might be of significant value. Outlining the nature of design-led approaches that are emerging in order to open up a cross-disciplinary discourse into design research.

Presentation slides

<p>1.</p>  <p>The slide features a central graphic of a globe with various icons and text. The title 'A Design-led Approach' is at the top, with a subtitle 'Opening up a cross-disciplinary discourse into design research' below it. The globe is surrounded by several small icons representing different design disciplines and processes.</p>	<p>A Design-led Approach: opening up a cross-disciplinary discourse into design research</p> <p>Today – focusing on my foundation work into design-led approaches to research. I:</p> <ul style="list-style-type: none">- Engage with cross-disciplinary conversations and collaborations through the- Research in the area of design and the built environment.- At the Fenner School of Environment and Society at the ANU. <p>I am interested in – Expanding Context of Design</p> <ul style="list-style-type: none">- For social innovation towards sustainability- Co-design- Cross-species cohabitation <p>The design discipline is traditionally very visual and we often miss the other senses – sound design</p> <p>Aim: to open up a conversation about the value of Design approaches to the research community and the multi-disciplinary area of sonic information design</p>
<p>2.</p>  <p>The slide features a central graphic of a globe with several faces overlaid on it. The title 'Design with a Thousand Faces' is at the top, with a subtitle 'Multi-species cohabitation, design' below it. The globe is surrounded by several small icons representing different design disciplines and processes.</p>	<p>1. Design with a Thousand Faces</p> <p>“By ‘a thousand faces’ I am implying that a myriad of people in many different disciplines, from science to education, engage in the activity of design as part of their practice, from designing a research method to designing a course outline, and although they may not be a ‘professional designer’ they are one of the ‘faces’ of design. I am proposing that the activity of design is shared a cross all</p>

	<p>these manifestations and hence those who make their profession in design have something to offer through sharing their aptitude for design." (Hocking, 2009, p. 2)</p> <p>Discipline of design can share a design-led approach</p>
<p>3.</p> 	<p>Design Word, History, Misconception</p> <p>Word - Design, design, design –</p> <p>Design = an activity (to design) = a profession (of design) = a discipline (in design) = a way of thinking/doing (by design)</p> <p>Not an artifact</p> <p>History – Industrial revolution</p> <ul style="list-style-type: none"> - Bauhaus - mass produce culture - Modernism – preoccupation with aesthetics <p>Misconception – the object, artifact</p> <ul style="list-style-type: none"> - Superficial styling
<p>4.</p>  <p>Images: (Left to Right) - South Korean Animation – Pucca - Goya – Saturn - Ultrasound - Low Resolution Image</p>	<p>Aesthetics As a way of knowing</p> <ul style="list-style-type: none"> - Not just visual – all the senses - Beauty = aesthetic idea (but not the only kind of aesthetic) - Eco (2002, p. 428) today there is no longer an aesthetic ideal, instead there is an 'orgy of tolerance, the total syncretism and the absolute and unstoppable polytheism of Beauty'. - Aesthetics is a kind of poetic understanding, associated with the senses - Eg. visual - the relationship between the way things 'look' and what this evokes in the viewer. - Meaning constructed through the senses - Eg. Gaver's Auditory Icons <p>According to Findeli (1994) 'intuition' is a skill derived from aesthetics which enable design to engage with complex systems: "In the strictest sense, the systemic apprehension of complex reality arises from intuition.... Intuition is no more a given than is analytical reasoning and, as with the latter, it is necessary to train it. I believe that an aesthetic education is most apt to develop intuition in a rigorous, progressive manner, provided the nature of the education is well defined." (Findeli, 1994, p.63)</p> <p>Findeli defines intuition as the ability to comprehend complex patterns 'as the capacity to instantly grasp the structure of the relations that lend coherence to an organism or system, to seize its form (in the Aristotelian sense)' (p.63). Findeli forms the relationship between intuition and</p>

	<p>aesthetics from Goethe's epistemology of contemplative judgment 'this concept is central to the epistemology of Goethe, who called "anschauende Urteilskraft" (contemplative judgment), thus affirming its close relation to aesthetics' (p.63)</p> <p>Aesthetics of images:</p> <ul style="list-style-type: none"> • Pucca – playful • Goya's Saturn – grotesque • Low Res Ultra sound image – intermit <p>What might these sound like, taste like?</p>
<p>5.</p>  <p>Image from Law, 2004, p.1</p>	<p>2. After Methods</p> <p>'Clear descriptions don't work if what they are describing is not itself very coherent' (Law, 2004, p.2)</p> <p>Prof. John Law – Faculty of Social Sciences, Open University</p> <ul style="list-style-type: none"> - Sociologist & Science Technology and Society (STS) - Interdisciplinary - Thinking about heterogeneity - www.open.ac.uk/research/main/people/jl6987 <p>Need - Messy Methods</p> <ol style="list-style-type: none"> 1. Enactment 2. Multiplicity 3. Fluidity 4. Allegory 5. Resonance 6. Enchantment <p>Explained further in Chapter 1 <i>After Method: An Introduction</i> Law's book is about 'when social science tries to describe things that are complex, diffuse and messy... it tends to make a mess of it' (p.2) and argues 'the task is to imagine methods when they no longer seek to definite, the repeatable, the more or less stable. When they no longer assume that this is what they are after' (p.6)</p> <p>This is what a design approach can provide</p>
<p>6.</p> 	<p>Complex, Messy & Uncertain</p> <p>Irreducible complexity of everyday life</p> <ul style="list-style-type: none"> - Manzini, 1992, p.12 – need for more complex approaches to deal with the irreducible complexity of everyday life - Law, (2004, p.2) - need to 'Teach ourselves to think... and to know in new ways' <p>Perhaps not new but old ways of knowing (low-tech)</p>



Images: (Left to Right)

- Albrecht Durer Melancholia I 1514, Florence, Gabinetto dei disegni e delle stampe
- Raphael, The School of Athens, 1510, detail. Rome, Stanze Vaticane

History of Knowledge

From Authority to Evidence

- Good reason to update from the pre-enlightenment reliance on Authority to one (high-tech) based on reason, logic and evidence.
- But what have we lost?

From the practical arts to the library, books, pen & paper

'while Renaissance man investigated the universe with the instruments of the practical arts, the Baroque man foreshadowed here investigated libraries and books and... leaves on the floor or holds idly in his hands the instruments.' Umberto Eco, *On Beauty*, 2004, p.226

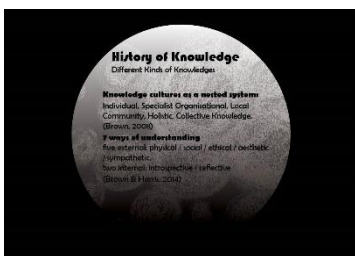
Un-rational – Rational - Irrational

- With the rise of scientific knowledge as the 'high-tech' in the modernist are of 'the cult of the new'
- Old forms of knowledge where denigrated as irrational
- Creative practice retreated into unhelpful adages of 'art for art sake', 'cult of personality'
- Chances of history divided up disciplines into out of the academy

Einstein Quote

Albert Einstein was asked one day by a friend "Do you believe that absolutely everything can be expressed scientifically?" "Yes, it would be possible," he replied, "but it would make no sense. It would be description without meaning – as if you described a Beethoven symphony as a variation in wave pressure." (from Ronald W. Clark, *Einstein: The Life and Times*, in Suzuki & McConnell, 1997, p. 19).

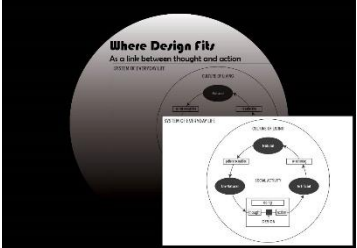
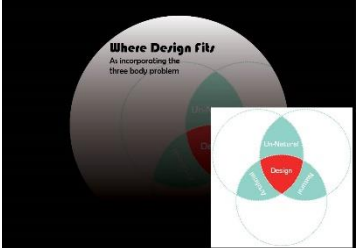
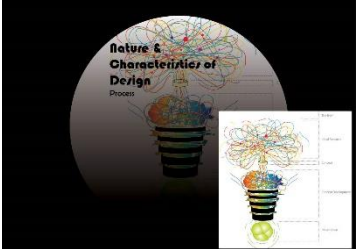
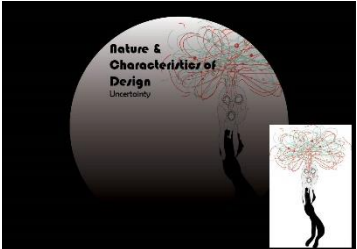
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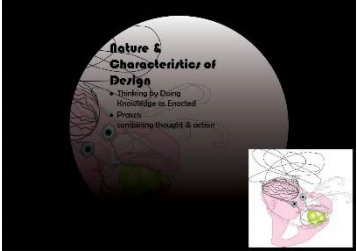



History of Knowledge

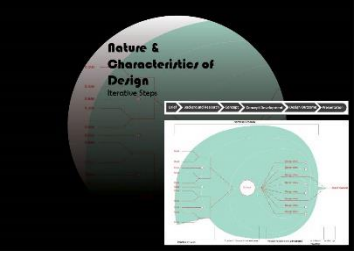
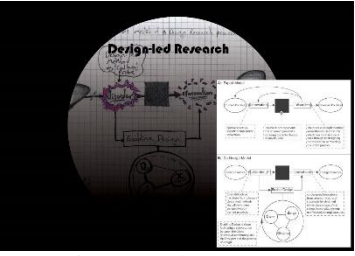
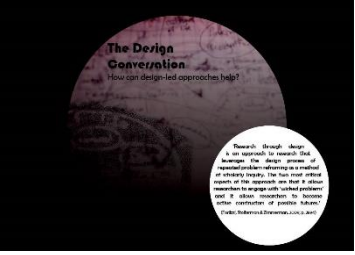
Different Kinds of Knowledges


- There was a time when we tried to scientise all kinds of knowledge – eg. Design methods movement in design
- But as Rittel's (1972) 'wicked problems' highlighted – this was a fruitless endeavor
- Once the social scientists needed to work for acceptance and now we are continuing to see the value and significance in broader perspectives and forms of knowledge
- Brown, 2008, p.37 - Knowledge cultures as a nested system
Individual, specialist Organisational, Local community, Holistic, Collective Knowledge.
- Brown and Harris's 2014 book *The Human Capacity for Transformational Change*
7 ways of understanding
five external: *physical / social / ethical / aesthetic / sympathetic*,
two internal: *introspective / reflective*

<p>8.</p>  <p>Image from Hocking 2011a&b</p>	<p>3. Where Design Fits Culture as Living - As a link between thought & action in the system of everyday life (Hocking, 2011a, p.136-140)</p> <ul style="list-style-type: none"> - Could be thought of as 'low-tech' as appropriating old forms of knowledge construction. (Hocking, 2011a, p.38) - In 'wicked problems' Rittel (1972) was arguing against the scientisation of design – the need for design to deal with things that were not simple - Abductive logic – propositional knowledge – fictional possibilities – imagining futures - Un-rations as other than rational (rather than irrational) - Knowledge for acting - For constructing meaning in the everyday - Acculturating technology - What could/should/ought to be rather than 'what is' or 'why it is'
<p>9.</p>  <p>Image from Hocking 2011a&b</p>	<p>Where Design Fits As Incorporating the Three-Bodied Problem Physics – more than two bodies interacting becomes complex; that is impossible to predict (where as two follow Newton's laws)</p> <p>Three-Bodied Design sketch-model (Hocking, 2011a, p.129)</p> <ul style="list-style-type: none"> - Where design lies within the intersection of the three (Natural, Artificial, un-natural). Each component is both outside and integral to design. - Making up the complex context of design - Dancing with disorder
<p>10.</p>  <p>Image from Hocking 2011a&b</p>	<p>Nature & Characteristics of Design Process (Hocking, 2011a, p.47)</p> <ul style="list-style-type: none"> - Design is a process - Existing regardless of content - combines knowledge from other fields to construct a proposition for something new - A conversational process – feedback loops - Identity as central – personal – repetition=difference - Fluidity of meaning – dancing with disorder – keeping it messy - Playful -
<p>11.</p>  <p>Image from Hocking 2011a&b</p>	<p>Nature & Characteristics of Design Uncertainty (Hocking, 2011a, p.45, 77-78)</p> <ul style="list-style-type: none"> - 'Fear of the blank page' - Start with everything and nothing - not knowing where it will end up - For the practice of design there is an importance and usefulness in uncertainty, disorder and ambiguity: of leaving open that which cannot be articulated, space for the unknown and unknowable, room for reflection, realignments and re-connections, a place

	<p>to play with ones own conceptions. Design's ability to work within such ambiguity could be seen as derived from its casual, conversation-like quality (Glanville, 2007 & 2008).</p>
<p>12.</p>  <p>Image from Hocking 2011a&b</p>	<p>Nature & Characteristics of Design Thinking by Doing (Hocking 2011a)</p> <ul style="list-style-type: none"> - Thinking by doing – knowledge is enacted (p.43) - Praxis – turning theory into practice (p.49)
<p>13.</p> 	<p>Nature & Characteristics of Design Cross, 1999 – rhetorical, exploratory, emergent, opportunistic, abductive, reflective, ambiguous, risky & complex</p> <p>Considering What Design Can Do Cross (1999)says Design is Rhetorical, p.28 <i>'design is rhetorical.</i> By this, I mean that design is persuasive.' eg. Intending to go to buy something sensible and come away with something impractical but beautiful. 'Design is rhetorical also in the sense that the designer, in constructing a design proposal, constructs a particular kind of argument' 'Architect Denys Lasdun: Our job is to give the client... <i>not</i> what he wants, but what he never dreamed he wanted; and when he gets it, he recognizes it as something he wanted all the time.'</p> <p>Exploratory, p.28 <i>'design is not a search for the optimum solution to the given problem, but that design is exploratory.</i> The creative designer interprets the design brief not as a specification for a solution but as a kind of partial map of unknown territory, and the designer sets off to explore, to discover something new, rather than to return with yet another example of the already familiar'</p> <p>Emergent, pp.28-29 <i>'design is emergent—relevant features emerge ... the solution and the problem develop together.'</i> 'architect Richard MacCormac has observed: I don't think you can design anything just by absorbing information and then hoping to synthesise it into a solution. What you need to know about the problem only becomes apparent as you're trying to solve it.'</p> <p>Opportunistic, p.29 <i>'design is opportunistic,</i> and so the path of exploration cannot be predicted in advance...the apparently ad hoc and surprise-ful nature of creative design activity</p> <p>Abductive Propositional form of logic (Rather than inductive or deductive).</p>

	<p>'If deduction could be encapsulated as the logic of "what is", then induction's rationale would be "what should be", while abductive thought concerns "what if" or "what might be"' (Hernandez, Evans & Cruckshank, 2013, p.8, see http://meetagain.se/papers/seven/design_history_and_the_history_of_designing_ead_2013.pdf)</p> <p>Reflective p.30 'Design is reflective. The designer has to have some medium—which is the sketch—which enables half-formed ideas to be expressed and to be reflected upon: to be considered, revised, developed, rejected and returned to.' - iterative</p> <p>Ambiguous p.30 'The uncertainty of design is both the frustration and the joy that designers get from their activity; they have learned to live with the fact that <i>design is ambiguous</i>'</p> <p>Risky p.30 'design is risky—it is not comfortable, and it is not easy. The designers I have quoted above ... made their reputations by taking risks.' ie. dare to fail</p> <p>Complex 'I have wanted to show that this is a difficult conversation: we are not talking about simple activities that can be expressed in simple concepts. I don't want to imply that designing is mysterious and obscure; but I do want to show that it is complex'</p> <p>What Law (2004) would call 'Messy Methods'</p> <ul style="list-style-type: none"> - Glanville, explains how design deals with complexity by using the 'black box' (Glanville, 2007) and 'conversation' (Glanville, 2008) analogy, as a tool for describing how designers 'can build descriptions of the world that, ultimately, are based not in presumed knowledge but ignorance' (Glanville, 2007, p.189). He describes the black box as 'a powerful device... for... acting with/from the unknown/unknowable' (p.189). This design approach could be described as putting reality into a black box and having a conversation with it. In this way everyday life is not simplified; instead, the interaction becomes a conversational process between the two participants: the designer and the black box. The designer does not need to know what is in the black box and therefore does not need to have an intimate understanding of the complexity. Design only needs to understand the interaction of the conversation and by doing this can come to a conversational agreement – an outcome in the form of a design proposal. (Hocking, 2011, p.81)
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<p>14.</p> 	<p>Nature & Characteristics of Design Iterative Steps (Hocking, 2011a, p.46)</p> <ul style="list-style-type: none"> - Iterative steps (brief, background research, concept, concept development, design outcome, presentation) – (collecting, selecting, assimilating, translating, transforming)
<p>15.</p>  <p>Image from Hocking 2011a&b</p>	<p>4. Design-led Research Expert vs CoDesign (Hocking, 2011a, 132-136)</p> <p>Frayling, 1993 Research into art and design Research through art and design Research for art and design</p> <p>Archer, 1995 research about practice; research for the purposes of practice research through practice</p> <p>Downton, 2004 Research for design Research about design Research through design</p> <p>Research through design Also called: Practice-based research Research by project Action research in design Project-grounded research</p> <p>Question – What Next?, What if?, What might be? Rigour – Well considered Abductive logic – propositional Generating knowledge about possible futures</p>
<p>16.</p> 	<p>5. The Design Conversation How design-led can approaches help?</p> <p>'Research through design is an approach to research that leverages the design process of repeated problem reframing as a method of scholarly inquiry. The two most critical aspects of this approach are that it allows researchers to engage with 'wicked problems' and it allows researchers to become active constructors of possible futures.' (Forlizzi, Stolterman & Zimmerman, 2009, p. 2894).</p> <p>One participant mentioned... this approach to research might one day be considered the design research community's most substantive contribution to the larger</p>

	<p>research community. (Forlizzi, Stolterman & Zimmerman, 2009)</p> <p>Design is not just about problem-solution because some issues do not have a solution but require ongoing engagement embedded in the culture of living. Rather design is about – change for the better.</p> <p>Discussion</p> <ul style="list-style-type: none"> - Significance - What, Why & How is a creative contribution beneficial to research? - Importance of Diversity in Research - Restores a Balance in Knowledge Construction to Include Creative Practices in Research
<p>17.</p> 	<p>The End!</p>

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Dr Viveka Turnbull Hocking's Publications:

BOOK CHAPTERS

Hocking, V.T. & A. MacKenzie (2016) A Design-Led Approach for Enabling Collective Imagining of Sustainable Urban Futures. In: R. Leshinsky & C. Legacy (Ed.) <i>Instruments of Planning: Tensions and Challenges for More Equitable and Sustainable Cities</i> (pp. 105-116). New York: Routledge
Hocking, V.T. (2011) An Ecology for Design: From the Natural, Through the Artificial, To the Un-Natural. In L. Graham (Ed.) <i>Sustainability Research by Designers: An Anthology</i> . Champaign, Ill: Common Ground
Hocking, V. T. (2010). Designerly Ways of Knowing: What Does Design Have to Offer? In V. Brown, J. A. Harris & J. Y. Russell (Eds.), <i>Tackling Wicked Problems : Through the Transdisciplinary Imagination</i> (pp. 242-250). London: Earthscan.

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Hocking, V.T., V.A. Brown & J.A. Harris (2015) Tackling Wicked Problems Through Collective Design, <i>Intelligent Buildings International</i> , 8:1, 24-36, From http://www.tandfonline.com/doi/full/10.1080/17508975.2015.1058743
Hocking, V. T. (2009a). Design With a Thousand Faces: Design-Led Methods for the Social Science Research Community. <i>The International Journal of Interdisciplinary Social Sciences</i> , 4(3), 1-16.
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THESIS

Hocking, V.T. (2011). <i>Beyond the Object: An intersection of design and research within a sustainability context</i> . The Australian National University, Canberra see http://studiostrezii.com.au/DesignResearch/Beyond-the-Object.html
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Hocking, V.T. (2013, Nov 27-29). <i>The Wicked Muse: Partnering Creative Practice, Local Communities and Sustainability</i> , Paper presented at the State of Australian Cities Conference, Sydney, Australia. From http://apo.org.au/resource/the-wicked-muse-partnering-creative-practice-local-communities-and-sustainability
Hocking, V.T., Kunz H. & Quinn M. (2013, May 12-13). <i>The Muse, the Wicked and the Wayfinder: The role of creative and cultural practices in imagining sustainable change</i> , Paper presented at the Eco Arts Conference, Wollongong, Australia
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