

ADDENDUM A: Ethics approval letter and informed consent form



Faculty of Engineering, Built Environment and Information Technology

Fakulteit Ingenieurswese, Bou-omgewing en
Inligtingtegnologie / Lefapha la Boetšenere,
Tikologo ya Kago le Theknolotši ya Tshedimošo

Reference number: EBIT/77/2018

30 July 2018

Ms A Grobler
Department of Architecture
University of Pretoria
Pretoria
0028

Dear Ms Grobler

FACULTY COMMITTEE FOR RESEARCH ETHICS AND INTEGRITY

Your recent application to the EBIT Research Ethics Committee refers.

Approval is granted for the application with reference number that appears above.

1. This means that the research project entitled "Extending the concept of interiority into informal urban scenarios of (South) Africa: appropriation and meaning-making" has been approved as submitted. It is important to note what approval implies. This is expanded on in the points that follow.
2. This approval does not imply that the researcher, student or lecturer is relieved of any accountability in terms of the Code of Ethics for Scholarly Activities of the University of Pretoria, or the Policy and Procedures for Responsible Research of the University of Pretoria. These documents are available on the website of the EBIT Research Ethics Committee.
3. If action is taken beyond the approved application, approval is withdrawn automatically.
4. According to the regulations, any relevant problem arising from the study or research methodology as well as any amendments or changes, must be brought to the attention of the EBIT Research Ethics Office.
5. The Committee must be notified on completion of the project.

The Committee wishes you every success with the research project.

Prof JJ Hanekom

Chair: Faculty Committee for Research Ethics and Integrity
FACULTY OF ENGINEERING, BUILT ENVIRONMENT AND INFORMATION TECHNOLOGY

INFORMED CONSENT FORM - STUDENTS **(Form for research participant's permission)**

1. Project information

1.1 Title of research project:

Extending the concept of interiority into informal urban scenarios of (South) Africa:
appropriation and meaning-making

1.2 Researcher details:

Anika Grobler, Department of Architecture, 012 420 2095, anika.grobler@up.ac.za

1.3 Research study description.

a) Project and objectives

The project investigates the way in which people occupy and transform spaces. It searches for a deeper understanding of the way we create meaning around us. It is focused on user(s) by describing and analyzing the dynamic and temporary aspects of living, the relationship and association with and between object and space, human behaviour, and social interaction.

[The project explores a deeper understanding of interiors and spatial design. It is focused on the dynamic, temporal and intangible aspects of interiors, as compared to the static and physical architectural. The objective is to follow a people-centred approach, by acknowledging social interactions, appropriation of space and the creation of meaning. The study explores alternative, but complementary methods to that of conventional architectural research and design inquiry. Other ways of critical design investigation include methods from the creative and visual arts.]

b) What will be required of participants?

Participants will be required to engage in studio activities integrated into existing design projects. This will entail observational analysis of situations and contexts (text and drawings) in the public urban environment (participant observations), but also of fictional scenarios; photographic studies; narrative writing; association and connotation investigations; and the making of critical 3D representations in an exploration to express meaning. Critical reflection is integral to the process. Here, students will be informants for participant observation where the researcher performs critical observation by means of memo writing, taking of photographs and video recording of the process.

c) Risks to participants

No foreseen risks are identified. The research activities are integrated with existing design projects in the modules, ONT 303 for undergraduate, RFP 713 / 723 / 733 / 740 for Honours and DPD 803 for MProf years.

2. Informed consent

2.1 I, _____ hereby voluntarily grant my permission for participation in the project as explained to me by the researcher, Anika Grobler.

2.2 The nature, objective, possible safety and health implications have been explained to me and I understand them.

2.3 I understand my right to choose whether to participate in the project and that the information furnished will be handled confidentially, unless I explicitly state otherwise for my name to be associated with creative work and myself to be identified in photographic and or video footage. I understand that I may withdraw at any stage. I am aware that the results of the investigation (visual and textual) may be used for the purposes of the PhD study and for publication and conferences.

2.4 I give permission for my name to be associated with creative work – textual or visual
YES _____ NO _____

2.5 I give permission for myself to be identified in photographic and or video footage
YES _____ NO _____

2.6 Upon signature of this form, the participant will be provided with a copy.

Signed: _____ Date: _____

Witness: _____ Date: _____

Researcher: _____ Date: _____

ADDENDUM B: Plug-in workshop brief

plug[interiority]

a workshop exploring the dynamic meaning-making process of identities in the city

Broad aims

As 'plug-in', the workshop intends to serve as a tool to investigate and interrogate:

- Abstract/symbolic spatial expressions for representing dynamic conditions of living (in different contexts, programmes and typologies)
- Associations and meanings that are assigned through interaction and appropriation – interface and encounter at human scale
- A different creative inquiry approach: critical artefact exploration – not object focused, but people-process driven

Broad objectives

The main objective is to investigate the following by means of creative practice:

- Focus on the making and inhabiting of dynamic, fluid and temporal spaces
- Interrogating the intangible, emotive, relational and ephemeral conditions of/in spaces
- Identifying and revealing the dynamic conditions within everyday scenarios that are contextually loaded and located
- Assigning associations and meanings as informal interpretations of meaning-making
- Participation of students as observing informants, bringing the city into the studio
- Making of representations using 'second hand / prior use' objects and materials.

Workshop outcomes

Students are able to:

- Articulate by means of visual and textual means, intangible/ephemeral qualities of living
- Interrogate and interpret the social condition that appropriates and overlays the static manifestation of built form
- Design for human well-being (social, emotional, psychological) within complex, responsive scenarios/environments (social sustainability)

Keywords

- SUBJECT FOCUS: interiority, identity, meta-space, behavioural settings, social sustainability
- METHODOLOGY: critical artefact, process-based, provocation, visual arts, narrative

Situating the exploration

CONTEXT AND BACKGROUND

The workshop serves as a 'plug-in' exploration to expand the process of design inquiry as part of the studio project (within any context, typology and programme). It explores a deeper understanding of interiority, meaning-making and identity when considering the design of everyday spaces.

It questions the dominant model of spatial (interior) production or the traditional view of enclosure - object, user and space. Instead, the focus revolves around the dynamic, temporal and intangible conditions of interiors and interiority, shaped by social interactions.

...interiority is the abstract quality that enables the recognition and definition of an interior. It is a theoretical and immaterial set of coincidences and variables from which 'interior' is made possible... mobile and promiscuous...intimate with and contaminates every interior and every inside (McCarthy 2005:112).

This elusive and intangible phenomenon manifests itself everyday as people occupy, adapt and transform spaces for working, living and socialisation. Changing patterns are influencing ways in which people make and shape spaces to inhabit. Interesting behaviour-interface scenarios, influenced by both internal and external forces, are informally created. This is the spirit of the city. It relates to everyday rituals and narrates the performance/display of daily sequences of inhabitation, concerned with real-world conditions of living.

It is encountered at human scale, where tangible and intangible encounters are made visible through fluid and dynamic living conditions.

When a part of the city is designed as metaspace, it becomes an urban gallery – a fluid form of public space that evolves in time, generating different definitions of public space and different ways of participating in it (Bunschoten, 2004:59-60).

metaspace [*noun*] *a space transcending ordinary physical space* (Macmillan Dictionary).

With a sensitive awareness to unspoken needs and requirements of people, reflect on the experience, well-being, quality of life and emotional demands people make on its spaces. Consider that which is not obvious or explicit.

The storyline fell naturally into the construct of the triad: THE COMMONLY UNSEEN, THE COMMONLY UNHEARD and COMMONLY UNFELT (Bach, 1965:x).

- UNSEEN [insight/reflection/awareness/perception]
- UNHEARD [inspiration/recognition/intuition/receptivity]
- UNFELT [empathy/consciousness/expectation/apprehension]

Tacit [*adj*] *taken for granted, not said aloud, alluded to, allusive, assumed, hinted at, implicit, implied, inarticulate, indirect, inferred, intimated, silent, suggested, undeclared, understood, unexpressed, unsaid, unspoken, unstated unvoiced, wordless* (Roget's 21st Century Thesaurus)

Situating the methodology

CRITICAL [ARTEFACT] AS DESIGN PROCESS AND INQUIRY

The workshop explores alternative, but complementary methods to that of conventional architectural research and practice (drawings and models). Other ways of critical design investigation include methods from the creative arts and narrative inquiry (storytelling by means of descriptions and vignettes). In addition, the building of a critical artefact, using materials that are not normally associated with architectural/design studio practice, are deliberately used. Abstract/symbolic representations are intended as outcome in order to provoke and formulate new questions.

“Critical Design uses speculative design proposals to challenge narrow assumptions, preconceptions and givens about the role products [spaces] play in everyday life” (Dunne & Raby in Bowen 2010:3).

In this four-hour workshop, the design process is set out to address the preconceptions and assumptions of the way spaces are used as a provocation through design inquiry. It focuses on the temporal and fluid constructions and intangible associations that people intuitively assign. The intention of Critical Artefacts as methodology is outlined (Bowen 2010:1-4):

- Inspired by critical design
- Challenge preconceptions, to provoke, not shock
- Attitude instead of a method
- A method to make issues (or matters of concern) visible
- Uses design to formulate questions
- Human-centred (“make it more human”)
- Address sensitive (“delicate”) issues
- Displayed in galleries/museums
- Not mass produced or sold

PROVOCATION [noun] *incitement, stimulus, challenge, dare, instigation, awaken, evoke, bestir, elicit, instigate, prompt* (Roget's 21st Century Thesaurus)

Because of the subject of the workshop, the term 'artefact' is further interrogated/questioned for its relevance and accuracy for describing a methodology where the outcome of product is secondary to the process of investigation.

Materials

A selection of materials that are unconventional, non-traditional and alternative to general architectural/design studio practice is used in the workshop. These are daily use items, objects and materials that have been discarded by the original owner as 'second hand or of prior use and not necessarily waste materials. Examples could include, but are not limited to:

Textiles offcuts (wool, cotton, felt) / thread, yarn / wool, cotton / felt, pleather / elastic, rubber / wire / clothing / candles / newspaper / screws, nails / mesh (steel/plastic) / glass / fishing gut / food dye / packaging tape / sporting equipment / kitchen accessories / automotive accessories / toys / shoes / packaging material / paint, pencils, crayons

SEQUENCE AND DETAILS OF ACTIVITIES (Total: 4 hours)

DESCRIPTION	DURATION
1. Briefing and background (setting the scene)	10 minutes
2. Problem statement a. Description: 50-100 words describing the of matters/issues of concern (context, human-centred, experiential, programme) b. Summary: 10 abstract nouns, adjectives and adverbs (no common/proper/concrete nouns)	15 minutes
3. Series of annotated vignettes capturing the temporal/intangible a. Reflect on your observations on site/context and draw 5 vignettes to visually illustrate SITUATIONS / MOMENTS / SCENARIOS that consider matters/issues* above b. Annotate ASSOCIATIONS / CONNOTATIONS and MEANING-MAKING as observed and/or understood	25 minutes (5 per vignette)
4. Peer to peer evaluation and input (rotate to the left to find a colleague to share with) a. Share the selection and decision-making process b. Provide written feedback notes to capture the discussion	25 minutes
5. Building of the CRITICAL [ARTEFACT] as provocation a. An abstract/symbolic representation as a synthesis of the matters/issues above in 3d built form – giving presence to the intangible/temporal b. Use of materials as described above	2 hours
6. Reflective essay a. Critically reflect on the design process and expression of the workshop in 250-500 handwritten words b. Consider how the focus on the social, temporal and fluid contributed to the degree of complexity in design (behavioural settings, meaning-making, appropriation and identity, beyond the static interior/architectural design) c. Reflect on the use of alternative materials to the spatial expression possibilities and potential increased richness and complexity of spatial design.	20 minutes
7. Feedback and input a. Peer evaluation (one colleague that was part of the process, one colleague that sees the work afresh) b. Provide written feedback notes to capture the discussion	35 minutes
8. Ending and thank you a. Informal discussion – experience of workshop	10 minutes

*matters/issues could include, but are not limited to experiences, realities, delights, challenges, threats, opportunities...

References

Bach, M. 1965. *The power of perception*. California: DeVorss & Company.
 Bowen, S. 2010. *Critical artefacts and participatory innovation*. Paper delivered at CHI 2010 - ACM Conference on Human Factors in Computing Systems, April 10-15, Atlanta Georgia, USA.
 McCarthy, C. 2005. *Toward a definition of interiority*. In *Space and Culture* 8:2, pp.112-125.

ADDENDUM C: Examples of data matrices

DATA MATRIX: BIOPICS SUMMARIES CONDENSED_observations

description	B1	B2	B3	B4
<i>Role of researcher</i>	Insider	Outsider, visitor	Intruder, stranger	Stranger, outsider
<i>Disruption</i>	Disruption gradual thinking in studio	Disruption NEW	Disruption NEW	Continuation of disruption
<i>Design project</i>	Agile workspace, CBD	Convenience store, neighbourhood	Energy efficient luminaire	Critical artefact, exhibition / installation
<i>Duration</i>	14 weeks	4 weeks	4 weeks	14 weeks
<i>Timing of workshop</i>	First quarter of project	Last quarter of project	First quarter of project	Mid project
<i>Collaboration</i>	Fluid interaction and feedback	Constructive criticism and feedback	Very limited interaction and feedback	No interaction (perceived)
<i>Initial response to workshop</i>	Uncertain and hesitant, but excited and eager	Hesitant, uncertain Had to confirm activities as speculative and exploratory for students to 'relax'	Anxiety and distress, white paper fear	Grappling, struggling, apprehensive Opened up later on
<i>Problem statement</i>	Emotional disruption Normative dissociation Deeper understanding Contextual meaning Eco-systemic approach	Cognitive disruption Attention, little absorption (limited normative dissociation) Human-environment needs Framing of problem Reflective practice	Difficulty to connect with workshop intent Challenge to identify issues of concern as wicked problems Meaning-making when consider self into the equation as user – reconstruct / imagine Prototyping anxiety and manufacturing	Personal relation / view to wicked problems -activist (cognitive empathy, attention) -member of community (emotional empathy – absorption)
<i>Keywords</i>	Appreciative inquiry – potential Abductive reasoning Express empathy – emotional / immersive of context	Appreciative inquiry – potential Contextual matters direct influence	Cognitive disruption Functionality (prototyping) vs emotive (atmosphere) Emphasis on intangible	Focusing the project Abductive reasoning Framing of the problem
<i>Vignettes</i>	Initial hesitation Relational conditions between people and place City (disconnected) People (fluid organism) Identify the spirit of the city	Hesitation at first Binary conditions (physical and emotional) Empath – human-centred	Cognitive disruption Unsure how / what to represent Majority of class challenge to find expression beyond object, shapes and associations	No vignettes
<i>Critical artefacts</i>	Cognitive disruption Creative disruption PROOCATION Process emphasis Abstract models (symbolic) Representing issues of concern Shift – no spatial mind-set as abstract model [known to group of students]	Cognitive disruption Creative disruption -disruption catalyst for workshop activities (material selection) Sensory engagement Symbolic representations ABSTRACT, EMOTIONVE Representation speculative (felt 'forced' to think differently) Reflection in action Process tricky	CREATIVE CATALYST (icebreaker / relief) Creative disruption Cognitive disruption Abstract representations "forced" to use 2 nd life materials Symbolism Action of making	Abstract associations made Process driven Rough and exploratory Cognitive disruption Creative disruption CHALLENGE OF REPRESENTATION of wicked problems Direct dialogue with the situation Not much engagement with 2 nd life materials Challenge – modal shift between connected / separate voices
<i>Peer feedback</i>	Shared freely Themes emerging (id formation, physical / social significance, meaning-making and interconnectedness)	Constructive criticism in pairs Emphasis on meaning-making and human-centred matters (vs pragmatic)	Limited interaction or collaboration (materials, meaning-making, process, end-user)	No peer collaboration, except at end of workshop (formal discussion) Self-reflection: representation, focus, abstraction, approach, invention vs convention

<i>Reflective essay</i>	Emotional and psychological disruption Immersed in workshop NORMATIVE DISSOCIATION PERSONAL ACCOUNTS OF CHANGE (half the class) Deeper understanding Abstract models Themes emerging	Cognitive and creative disruption Psychological disruption (to a degree – personal experience) Second life materials open up new possibilities / meanings SHIFT – HOW problems are expressed CONNECTEDNESS, UNDERSTANDING deeper Different awareness	Challenged preconceived ideas Outcome based replace by narrative focus Challenge – represent intangible with visual translations “forced” to think beyond static Process of investigation (surprised by outcome) =usual generic approach replaced with personal experience	Cognitive, creative and emotional disruption Immersed in project (causes flux in self) Normative dissociation (attention – activist; and member – absorption) SHIFT – perspective / approach Speculate and question Render visible the intangible Empathy, compassion
<i>Trajectory to completion</i>	Quarter of class deliberate integration of workshop considerations into project (beyond selection of client) Modal shifts – client, community, social, dynamic, materials, engagement with process Deeper understanding and insight of wicked problems Framing of problem Dialogue with the situation	Workshop too late (feedback) As result, limited integration Eye opener User-centred Meaning of things Problem framing – identification Abstraction and symbolism Feedback and critical reflection Value – meaning, another perspective, identify problems	No apparent link to workshop and final design development Besides creative use of materials for prototyping process	Impact not clear – except approach and attitude towards project Deeper insight and understanding of wicked problems Framing of problems Dialogue with the situation Challenge – representation of concepts and ideas ABSTRACTLY AS PROVOCATION
<i>Post feedback</i>	Students: Connected deeper Different perspective Overcame barriers Generate meaning in spaces Express and association Material and detailing Panel: User-centred focus Social, dynamic considerations Meaning-making (symbolism and association) Contextual integration Relationships (inter)	Realization of meaning of things Abstraction and symbolism Representation – sharing with others Emphasis not only on aesthetics Deeper understanding Thinking Materials Time management Process Intangibles Timing of workshop	Student work: Framing of problems Wicked problems Human-centred Emotive and affective qualities Studio coordinator: Lateral thinking Less predictable Process iterative and explorative Light as medium Human-centred Critical reflection of self and process Research as starting point ENJOYED THE WORKSHOP Future consideration 40% of the class INTIMIDATING NEW PROCESS Researcher as intruder	External examiner: Thinking to expand Theory over emphasis Introduce free and spontaneous investigation Alternative forms of representation Focus the project Viewer perspective Message? Student: Understanding of thinking process Production abilities Creative freedom
<i>Alignment with ethos of school</i>	Extending: Empathy – connection Framing and engaging with problems Deeper understanding – insight Meaning-making User perspective Agents of change – [citizenship]	Human-centred approach Meaning-making Framing of problems Deeper insight and understanding Use of materials Other ways of engaging – design process	Human-centred approach Meaning-making Social agency Lateral thinking Explorative, iterative process Research as starting point	Citizenship Empathy – cognitive and emotional Critical reflection Problem framing Agents of change

DATA MATRIX: BIOPICS SUMMARIES CONDENSED_with literature

description	B1 UP	B2 UJ	B3 GDC	B4 SAIC
DATA	Insider	Outsider, visitor	Intruder, stranger	Stranger, outsider
Disruption	Disruption gradual thinking in studio	Disruption NEW	Disruption NEW	Continuation of disruption
Design project	Agile workspace, CBD	Convenience store, neighbourhood	Energy efficient luminaire	Critical artefact, exhibition / installation
Duration	14 weeks	4 weeks	4 weeks	14 weeks
Timing of workshop	First quarter of project	Last quarter of project	First quarter of project	Mid project
Collaboration	Fluid interaction and feedback	Constructive criticism and feedback	Very limited interaction and feedback	No interaction (perceived)
Initial response to workshop	Uncertain and hesitant, but excited and eager	Hesitant, uncertain Had to confirm activities as speculative and exploratory for students to 'relax'	Anxiety and distress, white paper fear	Grappling, struggling, apprehensive Opened up later on
<p>[Problem statement]</p> <p><i>Disruption Provocation</i></p> <p><i>Empathy 4 phases</i> <i>Routes to empathy</i> <i>Levels of mindreading (awareness)</i></p> <p><i>Dissociation</i> <i>Shifts between personas</i></p> <p><i>Contextual meaning</i> <i>Wicked problems</i> <i>Modal shifts</i> <i>Perspective</i></p> <p><i>Ways of knowing</i></p>	<p>EMOTIONAL DISRUPTION</p> <p>EMPATHY – affective resonance 1-discovery (contact, explore) & 2-immersion (absorb, expand understanding)</p> <p>Routes to empathy -mirror (project own BIAS) -reconstructive (imagination of what can be) – Abductive reasoning Low and high level awareness</p> <p>Normative dissociation (continuum) Deeper understanding</p> <p>CONTEXTUAL MEANING Eco-systemic approach Wicked problems Modal shifts Perspective</p> <p>Shifts between personas</p> <p>Connected-separate knowing</p>	<p>COGNITIVE DISRUPTION</p> <p>EMPATHY - attention, little absorption COGNITIVE EMPATHY (reasoning) 1-discovery (explore) & 2-immersion (limited / pragmatic)</p> <p>Routes to empathy -mirror (personal BIAS) -reconstructive (pragmatic imagination, constructive process) Mostly low level awareness</p> <p>Limited normative dissociation Human-environment needs</p> <p>FRAMING OF PROBLEM REFLECTIVE PRACTICE PERSPECTIVE taking</p> <p>Connected-separate knowing</p>	<p>Difficulty to connect with workshop intent Challenge to identify issues of concern as wicked problems</p> <p>COGNITIVE EMPATHY (reasoning) 1-discovery (explore)</p> <p>Routes to empathy -mirror (own experience, perception bias) -reconstructive BIAS – commission (egocentric – designer’s view)</p> <p>Meaning-making when consider self into the equation as user – reconstruct / imagine-Normative dissociation Prototyping anxiety and manufacturing</p> <p>ASKING CRITICAL QUESTIONS Ways of thinking and questioning Perspective taking</p> <p>Separate knowing [?]</p>	<p>Personal relation / view to wicked problems – levels of modal shifts Reflective practice</p> <p>EMPATHY -activist (COGNITIVE EMPATHY, attention) -member of community (EMOTIONAL EMPATHY – absorption / affective resonance 1-discovery (contact explore) & 2-immersion (expand understanding, absorb)</p> <p>Routes to empathy -mirror (project own biases) – activist - BIAS – own perspective, view -reconstructive (high level) – member - BIAS – commission (egocentric – architects view) and omission (ignorance of other opinions, views other than your own, inclusive of full picture) Continuum – normative dissociation Provocation</p> <p>Connected-separate knowing</p>

<p>[Keywords]</p> <p><i>Appreciative inquiry</i> <i>Abductive reasoning</i> <i>Contextual meaning</i></p> <p><i>Disruption</i> <i>Empathy</i></p>	<p>Appreciative inquiry – potential Abductive reasoning</p> <p>EMPATHY – affective resonance (emotional / immersive)</p> <p>CONTEXTUAL MEANING</p>	<p>Appreciative inquiry – potential Contextual matters direct influence – CONTEXTUAL MEANING</p>	<p>Cognitive disruption Functionality (prototyping) vs emotive (atmosphere) – juxtaposition</p> <p>DIALOGUE WITH THE SITUATION Emphasis on intangible</p>	<p>Focusing – PROJECT FRAMING Abductive reasoning Dialogue with the situation</p>
<p>[Vignettes]</p> <p><i>Reflective practice</i> <i>Co-development of problem-solution</i> <i>Dialogue with the situation</i> <i>Modal shifts</i></p> <p><i>Ways of knowing</i></p> <p><i>Disruption</i> <i>Shifts between personas</i></p> <p><i>Empathy</i> <i>Attention, absorption</i></p> <p><i>Representation</i></p>	<p>Initial hesitation Reflective practice Co-development of problem-solution Dialogue with the situation (context, people, self)</p> <p>Relational conditions between people and place</p> <p>City (disconnected) People (fluid organism) Connected knowing</p> <p>Identify the spirit of the city Expanding empathetic horizon (attention and absorption)</p> <p>Representation spontaneous</p>	<p>Hesitation at first Binary conditions (physical and emotional)</p> <p>Expanding the empathetic horizon – human-centred (ATTENTION and absorption)</p> <p>Dialogue with the situation Modal shifts</p> <p>Shift between personas</p> <p>Representation exploratory</p>	<p>Cognitive disruption</p> <p>Unsure how / what to represent Majority of class challenge to find expression beyond object, shapes and associations</p> <p>Representation challenge</p>	<p>No vignettes</p>
<p>[Critical artefacts]</p> <p><i>Provocation</i> <i>Discursive design</i> <i>Disruption</i></p> <p><i>Contextual meaning</i> <i>Wicked problems</i> <i>Co-development of problem-solution</i> <i>Reflection-in-action</i> <i>Perspectives</i> <i>Dialogue with the situation</i> <i>Solution-led goal analysis</i> <i>Contextual relativism</i> <i>Exploratory learning</i> <i>Ways of knowing</i> <i>Process driven / action</i></p>	<p>Cognitive disruption Creative disruption</p> <p>PROVOCATION – materials and symbolism</p> <p>Contextual meaning</p> <p>Contextual relativism</p> <p>Process of making (driven)</p> <p>Discursive design Abstract models (symbolic)</p> <p>Representing issues of concern/ wicked problems Co-development of problem-solution Abstract model known to students</p>	<p>Cognitive disruption Creative disruption</p> <p>-disruption catalyst for workshop activities (material selection) Sensory engagement</p> <p>Symbolic representations Abstract, emotive DISCURSIVE DESIGN</p> <p>Representation speculative</p> <p>(felt 'forced' to think differently)</p> <p>Reflection in action Co-development of problem-solution</p> <p>Process tricky</p>	<p>CREATIVE CATALYST (icebreaker / relief)</p> <p>Creative disruption Cognitive disruption</p> <p>Abstract representations DISCURSIVE DESIGN</p> <p>“forced” to use 2nd life materials</p> <p>Symbolism</p> <p>Action of making</p> <p>Exploratory learning</p> <p>Perspectives Dialogue with the situation</p>	<p>Abstract associations made DISCURSIVE DESIGN</p> <p>Process driven Rough and exploratory</p> <p>Cognitive disruption Creative disruption</p> <p>CHALLENGE OF REPRESENTATION</p> <p>of wicked problems Direct dialogue with the situation</p> <p>Not much engagement with 2nd life materials Challenge – modal shift between SOLUTION-LED GOAL ANALYSIS connected / separate voices</p>

<p>[Peer feedback]</p> <p>Reflection-on-action Self-reflection</p> <p>Cognitive – ethical development</p> <p>Empathy – insight</p>	<p>Shared freely</p> <p>Themes emerging (id formation, physical / social significance, meaning-making and interconnectedness)</p> <p>Reflection-on-action</p> <p>Multiplicity > Contextual relativism</p> <p>Deeper understanding / insight</p>	<p>Constructive criticism in pairs</p> <p>Emphasis on meaning-making and human-centred matters (vs pragmatic)</p> <p>Reflection-on-action</p> <p>Multiplicity > Contextual relativism</p> <p>Deeper understanding / insight</p>	<p>Limited interaction or collaboration (materials, meaning-making, process, end-user)</p> <p>Multiplicity > < Contextual relativism</p>	<p>No peer collaboration, except at end of workshop (formal discussion)</p> <p>Self-reflection: representation, focus, abstraction, approach, invention vs convention</p> <p>Reflection-on-action</p> <p>Multiplicity > Contextual relativism</p> <p>Deeper understanding / insight</p>
<p>[Reflective essay]</p> <p>Disruption Discursive design Dissociation</p> <p>Empathy</p> <p>Cognitive – ethical development</p> <p>Experiential learning</p> <p>Ways of knowing</p> <p>Transformative learning</p> <p>SHIFT</p>	<p>Emotional and psychological disruption</p> <p>Immersed in workshop</p> <p>NORMATIVE DISSOCIATION</p> <p>PERSONAL ACCOUNTS OF CHANGE (half the class)</p> <p>Deeper understanding</p> <p>Discursive design - Abstract models Themes emerging</p> <p>Multiplicity > Contextual relativism > Commitment</p> <p>SHIFT – perspective – user (HCD) Contextual meaning</p> <p>Experiential learning -experience into knowledge Separate > Connected knowing</p> <p>Transformative learning <u>Frames of reference</u> -habits of mind (assumptions) Challenge to shift (very personal, own judgements)</p> <p>-point of view (appropriation)</p>	<p>Cognitive and creative disruption Psychological disruption (to a degree – personal experience)</p> <p>Second life materials open up new possibilities / meanings</p> <p>SHIFT – HOW problems are expressed CONNECTEDNESS</p> <p>UNDERSTANDING deeper Different awareness</p> <p>Double loop learning -Modification of goals / decisions Separate > < Connected knowing</p> <p>Transformative learning <u>Frames of reference</u> -habits of mind (assumptions) Assumed role of user in personal capacity (pragmatics)</p> <p>-point of view (appropriation) Able to adopt user perspective</p>	<p>Challenged preconceived ideas</p> <p>SHIFT – Outcome based replace by narrative focus Challenge – represent intangible with visual translations</p> <p>“forced” to think beyond static Process of investigation (surprised by outcome)</p> <p>=usual generic approach replaced with personal experience</p> <p>Double loop learning -Modification of goals / decisions Separate > [] knowing</p> <p>Transformative learning <u>Frames of reference</u> -habits of mind (assumptions) Personal judgements / opinions about use of light, quality of light Designer’s view strong, challenge to shift</p> <p>-point of view (appropriation) Able to shift view</p>	<p>Cognitive, creative and emotional disruption</p> <p>Immersed in project (causes flux in self)</p> <p>Normative dissociation (attention – activist; and member – absorption)</p> <p>SHIFT – perspective / approach Speculate and question</p> <p>Representation – render visible the intangible</p> <p>Empathy, compassion</p> <p>Experiential learning -experience into knowledge Separate > Connected knowing</p> <p>Transformative learning <u>Frames of reference</u> -habits of mind (assumptions) Own views, preconceived ideas challenge to shift (personal opinions, judgements) (omissions, commissions)</p> <p>-point of view (appropriation) Can take other’s point of view,</p>

	Able to shift view = Normative dissociation		= Normative dissociation	however, translation into discursive design challenge Limited normative dissociation Attachment too great, or too disconnected
<p>[Trajectory to completion]</p> <p>Modal shifts Wicked problems Framing Dialogue with the situation User centred</p> <p>Reflective practice Perspective</p> <p>Provocation Discursive design</p> <p>Empathy 4 phases Routes to empathy Levels of mindreading (awareness)</p> <p>Process driven</p> <p>Representation</p>	<p>Quarter of class deliberate integration of workshop considerations into project (beyond selection of client)</p> <p>Routes to empathy: from mirror to reconstructive (see below)</p> <p>MODAL SHIFTS – client, community, social, dynamic, materials, engagement with process</p> <p>Deeper understanding and insight of wicked problems Framing of problem Dialogue with the situation</p> <p>Empathy <u>3-Connection</u> (emotional level reflect, create understanding -affective: understand feelings -cognitive: understand meanings <u>4-Detachment</u> (Knowledge) Insights, increase understanding</p> <p>Routes to empathy <u>-from mirror to reconstructive</u> = modal shift <u>-reconstructive</u> -enactment / imagination -replicate experience -constructive process Result in deeper understanding of wicked problems</p> <p>Simulation theorists mindreading</p>	<p>Workshop too late (feedback) As result, limited integration Eye opener User-centred Meaning of things Problem framing – identification</p> <p>Abstraction and symbolism</p> <p>Feedback and critical reflection Value – meaning, (another) perspective taking (Mirror) (identify) problems framing (Mirror)</p> <p>Empathy <u>3-Connection</u> (emotional level reflect, create understanding -affective: understand feelings -cognitive: understand meanings <u>4-Detachment</u> (Knowledge) Insights, increase understanding -NOT REALLY REQUIRED – NOT FULL EMOTIONAL CONNECTION</p> <p>Routes to empathy <u>-mirror</u> -observation of functional pragmatism (own BIAS - self, judgements, expectations -modify empathy <u>-reconstructive</u> -imagination -replicate experience – immerse self (normative dissociation) -constructive process</p>	<p>No apparent link to workshop and final design development Besides creative use of materials for prototyping process</p> <p>Empathy <u>3-Connection</u> (create understanding) -limited affective empathy (feelings) -cognitive: understand meanings <u>4-Detachment</u> (Knowledge) Insights, increase understanding -NOT REALLY REQUIRED – NOT FULL EMOTIONAL CONNECTION</p> <p>Routes to empathy NOT VISIBLE (manufacturing focus)</p>	<p>Impact not clear – except approach and attitude towards project Deeper insight and understanding of wicked problems Framing of problems Dialogue with the situation</p> <p>(reconstructive route – imagination) Challenge – representation of concepts and ideas ABSTRACTLY AS</p> <p>PROVOCATION</p> <p>Empathy <u>3-Connection</u> (emotional level reflect, create understanding -MEMBER: affective: understand feelings -Activist: cognitive: not true internalisation / engagement to understand meanings through representation / interpretation <u>4-Detachment [not in affective resonance]</u> (Knowledge) Insights, increase understanding [compromised?]</p> <p>Routes to empathy -mirror – framing of problems -observation / immersion, discovery (bias - self, judgements, expectations -modify empathy – BIAS -reconstructive – dialogue with the situation -enactment / imagination -replicate experience</p>

	- FROM low level (perceptions, emotions) TO -high level (beliefs, desires, hopes, intention)	Simulation theorists mindreading -low level challenged (perceptions, emotions) - increase in high level (beliefs, desires, hopes, intention)		-constructive process -BIAS: omission (ignorance of one over another), commission (egocentric architects voice) Simulation theorists mindreading -low level challenged (perceptions, emotions) -high level complexity> ambiguity> (beliefs, desires, hopes, intention)
<i>[Post feedback]</i> <i>Empathy</i> <i>4 phases</i> <i>Routes to empathy</i> <i>Levels of mindreading (awareness)</i> <i>Perspective</i> <i>User-centred</i> <i>Contextual meaning</i> <i>Framing</i> <i>Wicked problems</i> <i>Reflective practice</i> <i>Process-driven</i> <i>Representation</i> <i>Discursive design</i> <i>SHIFT</i>	Students: Connected deeper – 3-connection 4-detachment for insight and knowledge Different perspective Overcame barriers Generate meaning in spaces Express and association Material and detailing Panel: User-centred focus Social, dynamic considerations Meaning-making (symbolism and association) Contextual integration Relationships (inter) Trajectory: Routes to empathy -from mirror to reconstructive = modal shift Reconstructive – BIAS: omission (ignorance due to own bias / judgements)	Realization of meaning of things Abstraction and symbolism Representation – sharing with others Emphasis not only on aesthetics Deeper understanding – 4-detachment Pragmatics and meaning-making Routes to empathy -mirror (user-centred) -reconstructive -imagination, constructive process) Thinking Materials Time management Process Intangibles Timing of workshop	Student work: Framing of problems Wicked problems Human-centred Emotive and affective qualities – 3-connection 4-detachment not needed (no emotional connection) Routes to empathy -mirror (user-centred) Studio coordinator: Lateral thinking Less predictable Process iterative and explorative Light as medium Human-centred Critical reflection of self and process Routes to empathy -reconstructive -imagination, constructive process Research as starting point ENJOYED THE WORKSHOP Future consideration 40% of the class	External examiner: Thinking to expand Theory over emphasis Introduce free and spontaneous investigation Alternative forms of representation Focus the project Viewer perspective Message? Routes to empathy -mirror – observation, immersion: own BIAS judgements -modify empathy – BIAS -reconstructive Replicate experience, constructive process = co-development of problem-solution Dialogue with the situation -BIAS: omission (ignorance of one over another), commission (egocentric architects voice) Simulation theorists mindreading -low level challenged (perceptions, emotions) -high level complexity> ambiguity> (beliefs, desires, hopes, intention) Student: Understanding of thinking process Production abilities

			INTIMIDATING NEW PROCESS Researcher as intruder	Creative freedom
<i>[Alignment with ethos of school]</i> <i>Empathy</i> <i>Framing Perspective</i> <i>Human-centred</i> <i>Reflective practice</i> <i>Process-driven</i>	<u>Extending:</u> Empathy – connection Deeper understanding - insight Framing and engaging with problems User perspective Meaning-making Agents of change – [citizenship]	<u>Extending:</u> Human-centred approach Framing of problems Meaning-making Deeper insight and understanding Use of materials Other ways of engaging – design process	<u>Extending:</u> Human-centred approach Meaning-making Social agency Lateral thinking Explorative, iterative process Research as starting point	<u>Extending:</u> Citizenship Empathy – cognitive and emotional Critical reflection Problem framing Agents of change

ADDENDUM D: EXAMPLES OF BIOPIC NARRATIVES

work in full
4/3/20

biopic journeys

✓ empathetic routes

	b1 UP	b2 UJ	b3 GDC	b4 SAIC
[Problem statement]	<p>EMPATHY - affective resonance</p> <p>1-discovery (contact, explore)</p> <p>2-immersion (absorb, expand understanding)</p> <p>Routes to empathy</p> <p>-mirror (project own BIAS) judgement and experience)</p> <p>-reconstructive (imagining what can be)</p> <p>Levels of mindreading</p> <p>[awareness] - CONTEXTUAL</p> <p>-Low level awareness (personal perception and emotions) - High level awareness (propositional attitudes)</p> <p><i>SPATIAL separate</i></p>	<p>EMPATHY - attention, little absorption</p> <p>COGNITIVE EMPATHY (reasoning)</p> <p>1-discovery (explore) & 2-immersion (limited / pragmatic)</p> <p>Routes to empathy</p> <p>-mirror (personal BIAS) -reconstructive (pragmatic imagination, constructive process, not really identifying what can be, pointing out problems currently experienced)</p> <p>Levels of mindreading</p> <p>[awareness] - CONTEXTUAL</p> <p>Mostly low level awareness</p> <p><i>SPATIAL commercial</i></p>	<p>COGNITIVE EMPATHY (reasoning) - attention (little absorption)</p> <p>1-discovery (explore)</p> <p>2-immersion (limited / pragmatic)</p> <p>Routes to empathy</p> <p>-mirror (own experience, perception bias)</p> <p>-reconstructive BIAS - commission (egocentric - designer's view)</p> <p>Levels of mindreading</p> <p>[awareness] - PRAGMATIC, MANUFACTURING</p> <p>Mostly low level awareness</p> <p><i>USE OBJECT.</i></p>	<p>EMPATHY</p> <p>-activist (COGNITIVE EMPATHY, attention)</p> <p>-member of community (EMOTIONAL EMPATHY - absorption / affective resonance)</p> <p>1-discovery (contact, explore)</p> <p>2-immersion (expand understanding, absorb)</p> <p>Routes to empathy</p> <p>-mirror (project own biases) -activist</p> <p>-BIAS - own perspective</p> <p>-reconstructive (high level)</p> <p>-member of community</p> <p>-BIAS</p> <p>-commission, egocentric (architects view)</p> <p>-omission (ignorance of other opinions, views other than your own, inclusive of full picture)</p> <p>Level of mindreading</p> <p><i>Exhibit</i> <i>social issues</i> <i>issues</i> <i>object</i> <i>high level</i> <i>social issues</i></p>
[Keywords]	<p>EMPATHY - affective resonance (emotional / immersive)</p> <p>Empathetic response related to wicked problems</p>	<p>Human-centred</p> <p>Cognitive empathy - (objective - observation, - personal experience (immersive))</p>	<p>Human-centred</p> <p>Cognitive empathy - (objective - observation)</p>	<p>Human-centred</p> <p>Cognitive empathy - (objective - observation)</p> <p>Emotional empathy - (subjective - immersion)</p>
[Vignettes]	<p>Expanding empathetic horizon (attention and absorption)</p> <p>Routes to empathy</p> <p>Mirror: -experience (absorption and IMAGINATION)</p> <p>Reconstruct: -observation (attention and REPRESENTATION)</p> <p><i>vignette = thinking + making Relation. Dimensionality understanding of shift in mode</i></p>	<p>Hesitation at first Binary conditions (physical and emotional)</p> <p>Expanding the empathetic horizon - human-centred (ATTENTION and absorption)</p> <p>Empathy central to vignettes interpretation -physical/emotional, relational, id/connections.</p> <p>Routes to empathy</p> <p>Mirror: -experience (absorption and IMAGINATION)</p> <p>Reconstruct: -observation (attention, REPRESENTATION)</p>	<p>Expanding the empathetic horizon - (attention, observation)</p> <p>Routes to empathy</p> <p>-mirror -observation of functional pragmatism (own BIAS - self judgements, expectations)</p>	<p>No vignettes</p> <p><i>problem in translation representational</i> <i>fair ideas</i> <i>two worlds</i> <i>philosophical</i></p>

to spatial objects installing of advocacy

— time —

empathetic routes

	b1 UP	b2 UJ	b3 GDC	b4 SAIC
[Problem statement]	<p>EMPATHY – affective resonance 1-discovery (contact, explore) 2-immersion (absorb, expand understanding)</p> <p><u>Routes to empathy</u> -mirror (project own BIAS, judgement and experience) -reconstructive (imagining what can be)</p> <p><u>Levels of mindreading [awareness]</u> - CONTEXTUAL -Low level awareness (personal perception and emotions) - High level awareness (propositional attitudes)</p>	<p>EMPATHY - attention, little absorption COGNITIVE EMPATHY (reasoning) 1-discovery (explore) & 2-immersion (limited / pragmatic)</p> <p><u>Routes to empathy</u> -mirror (personal BIAS) -reconstructive (pragmatic imagination, constructive process, not really identifying what can be, pointing out problems currently experienced)</p> <p><u>Levels of mindreading [awareness]</u> - CONTEXTUAL Mostly low level awareness</p>	<p>COGNITIVE EMPATHY (reasoning) – attention (little absorption) 1-discovery (explore) 2-immersion (limited / pragmatic)</p> <p><u>Routes to empathy</u> -mirror (own experience, perception bias) -reconstructive BIAS – commission (egocentric – designer’s view)</p> <p><u>Levels of mindreading [awareness]</u> – PRAGMATIC, MANUFACTURING Mostly low level awareness</p>	<p>EMPATHY -activist (COGNITIVE EMPATHY, attention) -member of community (EMOTIONAL EMPATHY – absorption / affective resonance 1-discovery (contact, explore) 2-immersion (expand understanding, absorb)</p> <p><u>Routes to empathy</u> -mirror (project own biases) -activist -BIAS – own perspective -reconstructive (high level) -member of community -BIAS -commission, egocentric (architects view) -omission (ignorance of other opinions, views other than your own, inclusive of full picture)</p>
[Keywords]	<p>EMPATHY – affective resonance (emotional / immersive)</p> <p>Empathetic response related to wicked problems</p>	<p>Human-centred Cognitive empathy – (objective – observation, - personal experience (immersive)</p>	<p>Human-centred Cognitive empathy – (objective – observation)</p>	<p>Human-centred Cognitive empathy – (objective – observation) Emotional empathy – (subjective – immersion)</p>
[Vignettes]	<p>Expanding empathetic horizon (attention and absorption)</p> <p><u>Routes to empathy</u> Mirror: -experience (absorption and IMAGINATION) Reconstruct: -observation (attention and REPRESENTATION)</p>	<p>Hesitation at first Binary conditions (physical and emotional) Expanding the empathetic horizon – human-centred (ATTENTION and absorption)</p> <p>Empathy central to vignettes interpretation -physical/emotional, relational, id/connections</p> <p><u>Routes to empathy</u> Mirror: -experience (absorption and IMAGINATION) Reconstruct: -observation (attention, REPRESENTATION)</p>	<p>Expanding the empathetic horizon – (attention, observation)</p> <p><u>Routes to empathy</u> -mirror -observation of functional pragmatism (own BIAS - self, judgements, expectations)</p>	<p>No vignettes</p>

[Critical artefacts]	<p>Expanding empathetic horizon Affective and cognitive empathy</p> <p>Commenting on: issues / themes emerging -see 'Dissociation' and 'Shift' columns</p>	<p>Expanding empathetic horizon Affective and cognitive empathy</p> <p>THEMES: -materials -think (understanding) -human-centred -process</p>	<p>Expanding empathetic horizon Affective and cognitive empathy</p> <p>Empathy <u>3-Connection</u> (emotional reflect) -affective: understand relational conditions -cognitive: understand meanings generated through interface and experience</p> <p>Routes to empathy <u>-from mirror to reconstructive</u> = modal shift <u>-reconstructive</u> -enactment / imagination -replicate experience -constructive process</p> <p><u>Simulation theorists</u> <u>mindreading</u> - FROM low level (perceptions, emotions) TO -high level (beliefs, desires, hopes, intention) – not always clearly articulated</p> <p><u>How problems are expressed</u> Human-centred -normative dissociation</p>	<p>EMPATHY - attention, little absorption COGNITIVE EMPATHY (reasoning) – activist -absorption, immersion EMOTIONAL EMPATHY -member of community</p> <p>1-discovery (explore) & 2-immersion (limited / pragmatic) 3-connect</p> <p><u>Routes to empathy</u> -mirror (personal BIAS – perceptions, judgements) -reconstructive (pragmatic imagination, constructive process, BIAS commission (egocentric, omission – one-sided view))</p>
[Peer feedback]	<p>Deeper understanding / insight into living scenarios in the city (economic, social, environmental, political)</p> <p>Meaningful place of connection = emotional, physical and mental</p> <p>Personal experience changes the context from physical to emotional (memory and emotive connections)</p>	<p>Deeper understanding / insight</p> <p>Personal connection</p> <p>Cognitive (observation) and emotional (immersive) empathy</p>	<p>Empathy -user centred</p> <p>Limited interaction = question nature of empathy for each other in the process of the workshop (?)</p>	<p>Deeper understanding / insight</p> <p>ALTHOUGH – feels as if students are going in circles with arguments, motivations</p> <p><u>Empathy</u> Cognitive (observation - activist) and emotional (immersive – member of society)</p> <p><u>Self-reflection</u> Routes to empathy -recontextualisation – commission – 'get out of architect's mindset – egocentric (challenge of preconceived ideas)</p>

[Reflective essay]	<p>Expanding empathetic horizon -deeper understanding (Themes emerging)</p> <p>Empathy <u>3-Connection</u> (emotional level reflect, create understanding -affective: understand feelings -cognitive: understand meanings</p> <p>Routes to empathy <u>-from mirror to reconstructive</u> = modal shift <u>-reconstructive</u> -enactment / imagination -replicate experience -constructive process</p> <p><u>Simulation theorists mindreading</u> - FROM low level (perceptions, emotions) TO -high level (beliefs, desires, hopes, intention)</p>	<p>Understanding deeper - different awareness</p> <p>Expanding empathetic horizon (Themes emerging)</p> <p>Empathy <u>3-Connection</u> (limited emotional level reflect) -affective: understand feelings of customers -cognitive: understand meanings generated through interface and experience</p> <p>Routes to empathy <u>-from mirror to reconstructive</u> = modal shift <u>-reconstructive</u> -enactment / imagination -replicate experience -constructive process</p> <p><u>Simulation theorists mindreading</u> - FROM low level (perceptions, emotions) TO -high level (beliefs, desires, hopes, intention) – not always clearly articulated</p> <p><u>How problems are expressed</u> Human-centred -normative dissociation -appropriation -identity formation (users and designer)</p>	<p>Understanding deeper - different awareness, insight Expanding empathetic horizon (Themes emerging)</p> <p>Empathy <u>3-Connection</u> (limited emotional level reflect) -affective: understand feelings of use and interface -cognitive: understand meanings generated through interface – appropriation, control and choice, inclusion</p> <p>Routes to empathy <u>-from mirror to reconstructive</u> = modal shift <u>-reconstructive</u> -enactment / imagination -replicate experience -constructive process CONTEXTUAL MEANING understanding through critical artefacts</p> <p><u>Simulation theorists mindreading</u> - FROM low level (perceptions, emotions) TO -high level (beliefs, desires, hopes, intention), visible in abstraction in critical artefacts, not articulated in text</p> <p><u>How problems are expressed</u> Human-centred -normative dissociation -appropriation -identity formation (users and designer)</p>	<p>Understanding deeper - different awareness Expanding empathetic horizon</p> <p>Empathy <u>1-discovery</u> (cognitive) (explore – investigating) -some students were 'trapped' in this phase) <u>2-immersion</u> (C & E) (limited / pragmatic) -Activists (detached) (absorbed) -Member of community (were 'swallowed' into the issues emotionally – lost perspective) <u>3-connection</u> (emotional level reflect continuum) -affective: understand feelings of customers -cognitive: understand meanings generated through direct experience and imagination</p> <p>Routes to empathy <u>-from mirror to reconstructive</u> = modal shift <u>-reconstructive</u> -enactment / imagination -replicate experience -constructive process BIAS – commission (egocentric), omission (exclusion)</p> <p><u>Simulation theorists mindreading</u> - FROM low level (perceptions, emotions) TO -high level (beliefs, desires, hopes, intention) – not always clearly articulated</p>
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<p style="writing-mode: vertical-rl; transform: rotate(180deg);">[Trajectory to completion]</p>	<p>Routes to empathy: from mirror to reconstructive (see below)</p> <p>Phases of empathy <u>3-Connection</u> (emotional level reflect, create understanding) -affective: understand feelings -cognitive: understand meanings <u>4-Detachment</u> (Knowledge) Insights, increase understanding -students who integrated into exam presentation -faded for the rest of class</p> <p>Routes to empathy <u>-from mirror to reconstructive</u> = modal shift <u>-reconstructive</u> -enactment / imagination -replicate experience -constructive process</p> <p><u>Simulation theorists mindreading</u> - FROM low level (perceptions, emotions) TO -high level (beliefs, desires, hopes, intention)</p> <p>EXPANDED EMPATHETIC HORIZON</p>	<p>Empathy <u>3-Connection</u> (emotional level reflect, create understanding -affective: understand feelings -cognitive: understand meanings <u>4-Detachment</u> (Knowledge) Insights, increase understanding -NOT REALLY REQUIRED – NOT FULL EMOTIONAL CONNECTION</p> <p>Routes to empathy <u>-mirror</u> -observation of functional pragmatism (own BIAS - self, judgements, expectations -modify empathy <u>-reconstructive</u> -imagination -replicate experience – immerse self (normative dissociation) -constructive process</p> <p>Simulation theorists mindreading -low level challenged (perceptions, emotions) -increase in high level (beliefs, desires, hopes, intention)</p>	<p>Empathy <u>3-Connection</u> (create understanding) -limited affective empathy (feelings) -cognitive: understand meanings <u>4-Detachment</u> (Knowledge) Insights, increase understanding -NOT REALLY RELEVANT – NO FULL EMOTIONAL CONNECTION</p> <p>Routes to empathy NOT VISIBLE (manufacturing focus)</p>	<p><u>Empathy phases</u> <u>3-Connection</u> (emotional level reflect, create understanding -MEMBER: affective: understand feelings -Activist: cognitive: not true internalisation / engagement to understand meanings through [representation / interpretation] <u>4-Detachment [not in affective resonance]</u> (Knowledge) Insights, increase understanding [compromised?]</p> <p><u>Routes to empathy</u> <u>-mirror</u> – [framing of problems] -observation / immersion, discovery (bias - self, judgements, expectations -modify empathy – BIAS <u>-reconstructive</u> – [dialogue with the situation] -enactment / imagination -replicate experience -constructive process -BIAS: omission (ignorance of one over another), commission (egocentric architects voice)</p> <p><u>Simulation theorists mindreading</u> -low level challenged (perceptions, emotions) -high level complexity> ambiguity> (beliefs, desires, hopes, intention)</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">[Post feedback]</p>	<p><u>Students:</u> Connected deeper – 3-connection 4-detachment for insight and knowledge</p> <p><u>Trajectory:</u> Routes to empathy <u>-from mirror to reconstructive</u> = modal shift Reconstructive – BIAS: omission (ignorance due to own bias / judgements)</p>	<p><u>Phases of empathy</u> 3-connection Deeper understanding, insight 4-detachment Pragmatics and meaning-making (not fully absorbed – detachment possible, also too late in project to fully attach / immerse)</p> <p><u>Routes to empathy</u> <u>-mirror</u> (user-centred) <u>-reconstructive</u> -imagination, constructive process – meaning-making)</p>	<p>Emotive and affective qualities – 3-connection with issues 4-detachment not needed (no emotional connection)</p> <p>Routes to empathy <u>-mirror</u> (user-centred observation) Pragmatics – functional use, user-object interface Routes to empathy <u>-reconstructive</u> -imagination, constructive process</p>	<p><u>Empathy</u> -attention – stays within observation (cognitive empathy) – detached as (ACTIVIST – new word proposed – CHAMPION or ADVOCATE) <u>Routes to empathy</u> <u>-mirror</u> – observation, immersion: own BIAS judgements -modify empathy – BIAS <u>-reconstructive</u> Replicate experience, constructive process [= co-development of problem-solution] Dialogue with the situation -BIAS: omission (ignorance of one over another), commission (egocentric architects voice)</p> <p><u>Simulation theorists mindreading</u> -low level challenged (perceptions, emotions) -high level complexity> ambiguity> (beliefs, desires, hopes, intention)</p>

[Alignment with ethos of school]	<u>Extending:</u> Empathy – connection, relation, association -expanding empathetic horizon Deeper understanding and insight	Deeper understanding and insight	Affective empathy (emotional) – connection to deeper understanding and insight	Empathy – cognitive and emotional (expanding empathetic horizon) Human-centred design focus
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challenge : shift

	b1 UP	b2 UJ	b3 GDC	b4 SAIC
[Problem statement]	Emotional response to real-life context (not usually the case) Extending understanding of site for purpose of virtual project building (past MArch student design proposal)	Real-life project – pertinent customer requirements identified in framing	<u>Challenge</u> Difficulty to connect with workshop intent Challenge to identify issues of concern / wicked problems Unfamiliar nature of workshop approach -student non-responsive at the start	<u>CHALLENGE</u> PROVOCATION -not solving problems REPRESENTATION <u>Topics emerging:</u> -liminality and transience -power and control -territoriality and presence <u>Themes emerging:</u> -empathy -meaning-making -social agency -urban condition IDENTITY / BELONGING
[Keywords]	Focus on essence of embodied experience	Potential identified (vs problems in problems statement)	<u>Challenge</u> of capturing essence with keywords overshadows shifts	From social processes to meaning-making
[Vignettes]	Represent binary condition in the city: -CITY: disconnected from its people [trapped condition] -PEOPLE: life = connections = spirit [vital mind-set] (appropriating ill-supported Infrastructure)	Thinking in a different mode to text THEMES -meaning-making (id and value) -memory and interaction -associations – human-centred	Challenge to generate vignettes	[None]
[Critical artefacts]	PROVOCATIVE REPRESENTATION (themes emerging) -authenticity -real-life conditions / scenarios -judgements / mind sets to change -importance of process (over product) -small change (bottom up) -self-correction, self-reflection -impermanence of things	Abstraction as aim DISRUPTION – MAKING (catalyst for workshop trajectory) Free, spontaneous vs anxiety, uncertainty at start Different process to normal familiar studio practice WAY OF THINKING perspective, reflective, critical	HUGE SHIFT IN THINKING AND ENGAGING -connection to making process -second life materials elicit spontaneous responses -no judgement -free expression <u>Themes emerging from MAKING:</u> -Process -Making and materials -Human-centredness	Exploratory process – no aim of creating a product -process driven PROVOCATION <u>CHALLENGE</u> Modal shift

[Peer feedback]	<p>Themes emerging (id formation, physical / social significance, meaning-making and interconnectedness, social identities)</p>	<p>Only half class documented comments (seems as if not a normal occurrence)</p>	<p>Limited student feedback (written and interaction) -notes only for 3 students</p>	<p>Verbal comments only</p> <p>Ideas well framed ALTHOUGH – feels as if students are going in circles with arguments, motivations</p> <p><u>CHALLENGE</u> <u>Self-reflection</u> -visual translation of ideas -making intangible concepts / issues visible</p> <p><u>Themes emerging</u> -think of issue (framing / focus) -approach (suggesting / pointing out -process (sequence) -translation (representation, interpretation)</p>
[Reflective essay]	<p>PERSONAL ACCOUNTS OF CHANGE (half the class noted a shift in some way) - perspective of user - contextual meaning -immersion -enable what already there -bottom-up approach -vision / potential unlocked -agency - HCD</p> <p>Quarter of class deliberate integration of workshop into exam work</p> <p>SHIFT in cognitive, creative and ethical development M > CR</p> <p>TIME: makes things visible (Kirsten)</p> <p>Methodology – intentions shifted Added new meanings Unravel abstract process Challenge self – depth and complexity</p>	<p>SHIFT – HOW problems are expressed CONNECTEDNESS</p> <p>ABSTRACT APPROACH TO CREATIVE INQUIRY</p> <p>Importance of human / social interaction</p> <p>SPATIAL DESIGN NOT RESTRICTED TO FOUR WALLS, RATHER SOLVING AN ISSUE</p> <p>TO BREAK DOWN COMPLEXITY -understanding</p> <p>TESTING – SPECULATIVE INQUIRY</p>	<p><u>CHALLENGE</u> -PRECONCEIVED IDEAS -represent intangible with visual translations</p> <p>SHIFT -outcome based replace by narrative focus -goal orientated at first -then created without goal or product in mind</p> <p>Became ENGAGE / CONNECT</p> <p><u>Themes emerging</u> -human-centred approach -meaning-making -social agency -fluid, temporary, flexibility conditions</p> <p><u>SHIFT FROM PROBLEM STATEMENT =</u> ¾ disconnected voice at start TO 99% connected voice at end INCREASED ENGAGEMENT AND CONNECTEDNESS [critical artefact making catalyst]</p>	<p>SHIFT <u>Challenge</u> -perspective and approach -speculate and to question</p>

[Trajectory to completion]	<p>Process – reverted back to conventional approach and attitude to the design process</p> <p>Richness faded as a result</p> <p>Complexity of interpretation became superficial and predictable</p> <p>Technical requirements of modules overshadowed the insights and depth of understanding</p> <p>Empathetic horizon expanded, but not explored to the fullest</p>	<p>MEANING-MAKING -to consumer -to process of making -abstraction (meaning without literal objects)</p> <p>PEER ASSESSMENT -incorporated into final design</p> <p>FOCUS Meaning (something of value) vs aesthetic (Nadene)</p>	<p>Majority of students -no apparent link to workshop and final design development Besides creative use of materials for prototyping process</p> <p>Except students who challenged the aim and purpose of the luminaire – addressing wicked problems</p>	<p>CHALLENGES TO OVERCOME (EXTERNAL COMMENTS) -own criticality required -not engaged enough -lack theoretical support -to develop further -determine focus -theory suffocating creativity -determine perspective (point of view) and message -explore media appropriate to represent issues</p> <p>IMPORTANT NOTE Challenging issues in project scope, interpretation, and representation prove maintain to be a challenge throughout – students manage to address some matters, but own intentions are not seen in the same light as the externals</p>
[Post feedback]	<p>Overcame barriers Generate meaning in spaces Express and association Material and detailing - associations</p>	<p>Emphasis not only on aesthetics -but also meaning-making</p> <p>Half the class provided post feedback</p>	<p>Research as starting point ENJOYED THE WORKSHOP</p> <p>However, major disruption / provocation to familiar, conventional studio practice</p> <p>Future consideration 40% of the class</p> <p><u>FOCUS</u> -from task lamps, to atmospheric lighting -from light as object, so light becoming spatial</p>	<p>CHALLENGES TO OVERCOME (EXTERNAL COMMENTS) -own criticality required -not engaged enough -lack theoretical support -to develop further -determine focus -theory suffocating creativity -determine perspective (point of view) and message -explore media appropriate to represent issues</p> <p>INTENT FOR SHIFT NOT TRULY OBTAINED – contradictory views by students and external</p> <p><u>Student feedback</u> Understanding of thinking process Production abilities Creative freedom</p>
[Alignment with ethos of school]	<p>Meaning-making Agents of change – [citizenship]</p> <p><u>INSIGHT</u> Need to reach Commitment position 7 (Perry)</p> <p>Active experimentation (Kolb)</p> <p>Activist (Honey & Mumford)</p> <p><u>FOR CITIZENSHIP FORMATION</u></p>	<p>Meaning-making</p>	<p>Meaning-making Social agency Research as starting point</p>	<p>Citizenship Agents of change</p>