Design as Civics: Simple principles and values of a citizens' practical philosophy of flourishing to redress the systemic issue of sustainability, the first steps.

Working Paper

Paul Emmerson, Robert Young

PHD Candidate (Professor)

Affiliation Northumbria University

1 Abstract

For today's and future generations, we prohibit the 'good life' due to the lack of fairness resulting from the unsustainable systemic environmental effects of capitalist defined lifestyles.

This paper challenge capitalism's power that dominates design practice and pedagogical theory. It first presents an overview of a new transdisciplinary theory. Its foundations being the synthesis of the Ancient Greek practice of civics – guided by its teleological goal the 'good life' – with design, termed design as civics (DaC). A theory representing the simple principles and values of a citizens' practical philosophy of flourishing.

The paper discusses a co-design project operationalising DaC's and its potential to enable citizens designers to 'aim' for 'fairness between citizen' and steer their City towards the 'good life,' towards flourishing.

Keywords: Design as Civics; Sustainability; Civics; Fairness between Citizens; Generative Metaphor; Systemic design

2 Introduction

The philosopher Compte's 19th-century statement of how *"The living are now more and more governed by the dead"* (White 1921 p.36) demands within our actions henceforth to acknowledge how our decisions steer our culture and prevent others from living the 'good life.' Because, we argue,

our decisions are remiss of 'fairness between citizens' (FBC) that underpins the global systemic issue of sustainability.

We can appreciate how fairness is absent from citizens whose opportunities are affected by the power applied by capitalism's 'free-market' paradigm. Power, for Foucault, is an action affecting the actions of others (Foucault 1982 p.789). Capitalism's power is viewed as the 'force' driving our consumer culture (Lovins et al. 1999) and is endangering our world's ecosystems (IPCC 2013) by causing the systemic damaging social, economic and environmental issues (European Environmental Agency 2012; IPCC 2014; Stern 2007) commonly termed as sustainability.

We contend design is complicit in our unsustainable culture due to its amoral nature (Jonas et al. 2009 p.104/6), lack of systemic perspective, and centrality of practice within today's capitalist economy. Thus, design and its pedagogies are 'unqualified' for redressing problems 'wicked problems' like sustainability that are not, *"definable, understandable and consensual,"* (Rittel & Webb 1973 p156; also see Conklin 2005; Levin et al., 2012).

We claim that citizens' informed power is ultimately required to address sustainability, starting from within their cities, taking action such as The City of Irving's banning of CFC's within aerosols (Papanek 1995 p.25).

DaC's transdisciplinary theory is explicitly conjectured to counter capitalism's instrumental rationality (Weber 1978 p.85; Brown 2006 p.711) with a value-rational citizens practice supporting their self-determined ambitions in the cybernetic act of steering their City towards the 'good life.' And by necessity that the 'good life' cannot be reasoned without considering the power relationship of 'fairness between citizen,' that DaC unambiguous addresses the issue of sustainment.

In proposing DaC, we agree that human culture, as a social process, shapes are being and our actions in the world (Vygotsky 1978; Barret 2011 p.36). That we construct ourselves (Vygotsky 1989 p.65) from within the reality we inhabit (Berger & Luckmann 1971) through our shared social practices (SSP) (Schatzki 1996 p.13; Reckwitz 2002; Shove, Pantzar and Watson, 2012). Therefore, the capacity of citizens capable of steering towards the 'good life' requires constructing the 'right' SSP from within our inhabited realities.

3 Background

Scholarly concerns for design practice and design's pedagogical uncritical stance regarding the implications of the 'free market' paradigm are longstanding (Papanek 1974; Manzini and Cullars 1992; Margolin 2006). In response, Margolin argues for a *"calculus of values"* (Margolin 2006 p.118) while Mancini and Cullars request an ethics of design practice (1992 p.5). Victor Papanek, spearheading the push for socially responsible design in the early 1970's, provides an alternative perspective. He promoted the necessity for designers to educate themselves within their community to understand the citizens' *"real needs"* (Papanek 1985 p.56). To oppose creating the *"evanescent wants and desires"* (Papanek 1985 p.15) of consumers that he argued the 'marketplace' forces commercial design practice to produce.

We agree with the above premises and draw on the thoughts of philosopher and educator Freire to help appreciate how citizens can co-create knowledge of the context of their lives. He summons citizens to develop their *"critical consciousness"* (Freire 1972 p.150) to confront and understand their reality. To question who holds power over them such that when *"he or she enters into reality so that, knowing it better, he or she can better transform it"* (Freire 1972 p.39).

Freire's contention that colonising powers – what we argue here today as being the rhetoric and instrumental practices of neoliberalism capitalism – *"absorbs those within it and thereby acts to submerge human beings consiousness"* (Freire 1972. pp.27-28). That it is our everyday practices of living – for example 'taught' consumerism, of driving one car to work and so forth – that Shove describes as shared social practices (SSP), ultimately become the norm and subsequently invisible from our perception (Shove 2011 p.88). That ultimately, we do not realise what choices we are making or what they mean external to their instrumental ends such as arriving at work. Living, from Freire's perspective, unquestioningly and uncritically, we leave capitalism's power unrecognised and unchallenged.

Educating oneself critically about one's circumstances is not new. The Ancient Greek citizens undertook such education as the practice of civics. Civics sought for the citizen's critical engagement in the politics of their City: its governance, of how they helm their collective power. Importantly, integral to civics lays the practicable knowhow of how to control instrumental rationality. Civics' teleological goal is the ongoing question, *'how do we achieve the 'good life' for all citizens?'* Its teleological goal represents a value-rationality. For Aristotle, value-rationality is charged to influence instrumental rationality's direction (Flyvbjerg 2001 p.53).

In our theorising of DaC, we follow in Plato's 'wake,' of his perceiving of how governing a City is steerable, from his Ship of State simile (Plato 1999). Whereby the governance of a City is a cybernetic relationship between it and its citizens.

However, differing from Plato's Ship of State is how DaC reimagines the ship's captain. Plato's captain at the helm represents the dêmos, the collective citizenry of the City. He has the power to change the City's direction (Keyt 2008 p.194), yet, being 'hard of hearing and poor of sight,' he lacks the knowledge and skills to steer wisely. The rhetoric of the ship's sailors – the politicians and their unwise self-serving promises – misguiding the captain towards the false goals of capitalism.

Plato's solution is to position the philosopher as the ships true navigator: a wise individual, skilled and knowledgeable as to steer the best course. However, as Plato argues, the philosopher often goes unheard or is disrespected (Keyt 2008 p.189). Thus our call is for citizens of the City, the dêmos, to collectively develop their 'critical consciousness' through DaC as an ongoing praxis. To revive the 'captain's' senses, intelligence and train in the skills required to appreciate the City's values and direct their power towards the City's goals.

Thus, in the synthesis of civics and design, to from DaC, we realise DaC as a practical philosophy. A reflexive value-rational, systemic radical political praxis for citizens possessing the teleological goal of delivering the 'good life,' for flourishing lives, through critically interrogating their City's steering towards the 'aim' of achieving fairness between citizens.

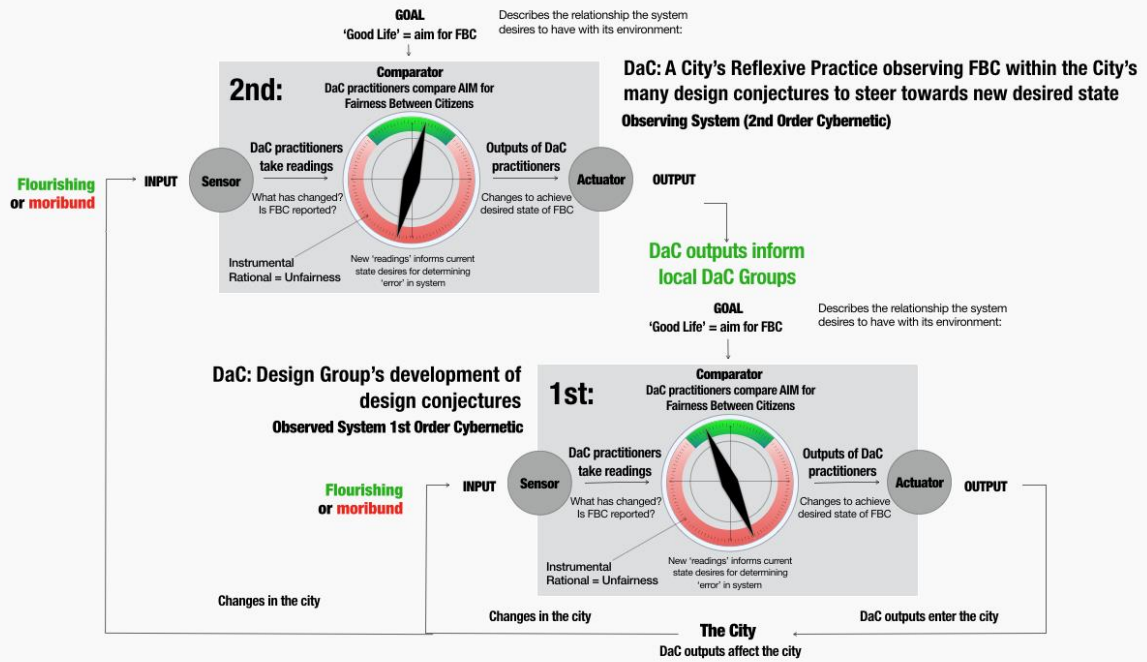## 4 DaC as 2nd order cybernetic practice

Plato's cybernetic thinking within his Ship of State simile importantly suggests how citizens may helm a city's steering.

We position DaC as a 2nd-order cybernetic practice (Heylighen & Joslyn 2001). A position aided by Glanville's characterisation that, *"cybernetics is the theory of design and design is the action of cybernetics"* (Glanville, 2007, p. 1178). Such that DaC provides citizens with the reflexive means to generate knowledge representing their social enquiries as collective voices within design conjectures symbolising the 'good life.' Thus, referring back to Vygotsky (Vygotsky 1978; Vygotsky 1989 p.65; Barret 2011 p.36), DaC is a SSP that enables citizens with the potential to create the realities they wish to live within.

Figure 1 describes DaC as a 2nd-order cybernetic process with ongoing feedback loops governing the City's steering towards the 'good life.' Figure 1 B defines the 2nd-order cybernetic process first as the citizen's individual practise of DaC, the group practise of DaC, and lastly, multiple groups practising DaC collectively informing the City's steering.
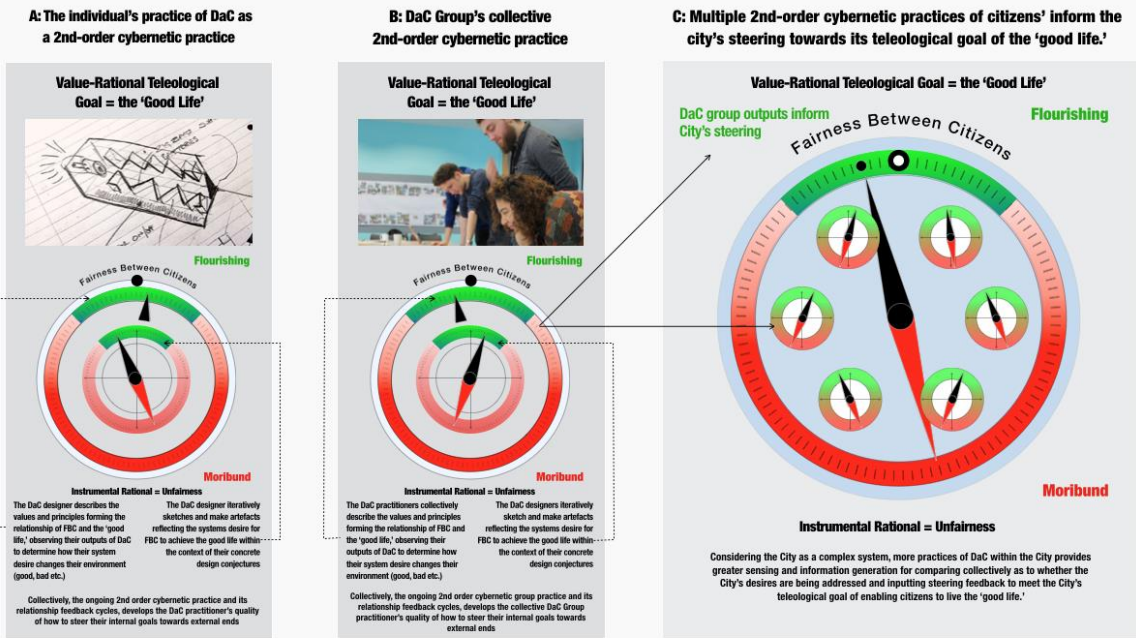
Figure 1: DaC as a citizens' 2nd-order cybernetic practice

5 DaC theory overview -

DaC takes a multidisciplinary approach. As DaC represents a radical design theory integrating diverse insights to collectively form the theory we refer readers to our prior exposition (Emmerson & Young 2017).

In the following section, we briefly overview DaC's theory

First, living in fairer societies is desired, with egalitarian societies having smaller ecological footprints alongside a readiness for change towards sustainment (Wilkinson & Pickett 2010 p.168). Findings reflected in Kasser (2011) and Dorling (2010), with substantial benefits report in health, education, employment and trust in more equal societies (Wilkinson & Pickett 2010).

Fundamental to DaC is how the moral value of fairness is a norm of human behavioural (Fehr and Fischbacher 2003 p.785), one that is reflected when working together on *"joint goals"* (Tomasello 2009b p.321). Our morality arising through our development of *"shared intentionality"* to undertake *'joint goals'*– cooperative actions such as hunting – to help and share with others the efforts and rewards (Tomasello 2009b p.321).
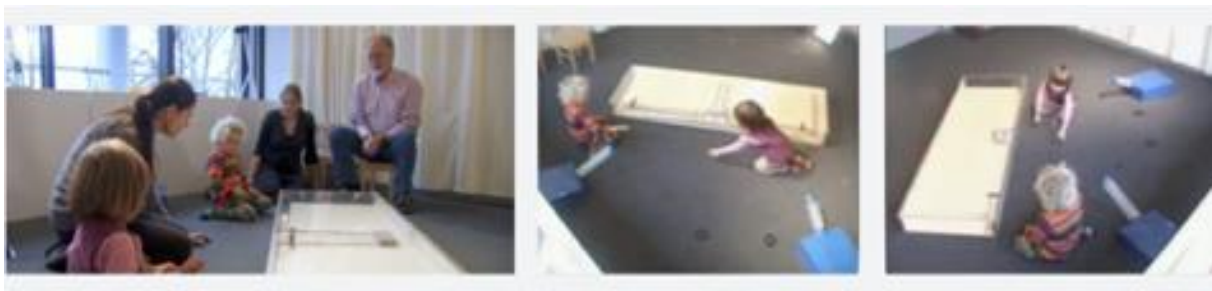

Figure 2: Prof. M. Tomasello (Developmental psychologist of the Max Planck Institute for Evolutionary Anthropology) explaining to Prof. A. Roberts, his study exposing how children in 'joint goal' tasks share the rewards fairly (Macdonald, T. 2013 t.24').

To assist contemplating the absence of the value of fairness from today's discourse on sustainability we propose describing sustainability as the systemic frame term *'sustainability as fairness'* (SaF) (Emmerson & Young 2017). Subsequently, we elucidate DaC using the framing expression, *(design as civics)* as *(sustainability as fairness)* (Emmerson & Young 2017). Thus we resolve DaC's goal as to achieve the 'good life' through the ongoing critical examination of steering its 'aim' for reconciling 'fairness between citizens' (FBC).

Civics, with its ongoing teleological goal of the 'good life' – for citizens to flourish – we argue, positions DaC in a value-rational paradigm. Figure 3 describes these two rationalities: DaC's goal towards the 'good life' and flourishing, opposing capitalism's 'free market' unsustainability.

Subsequently, Figure 5 accounts as our interpretation of Aristotle' thinking (Flyvbjerg 2001 p.53), depicting the value-rational practice of DaC encompassing capitalism's instrumental rationality.
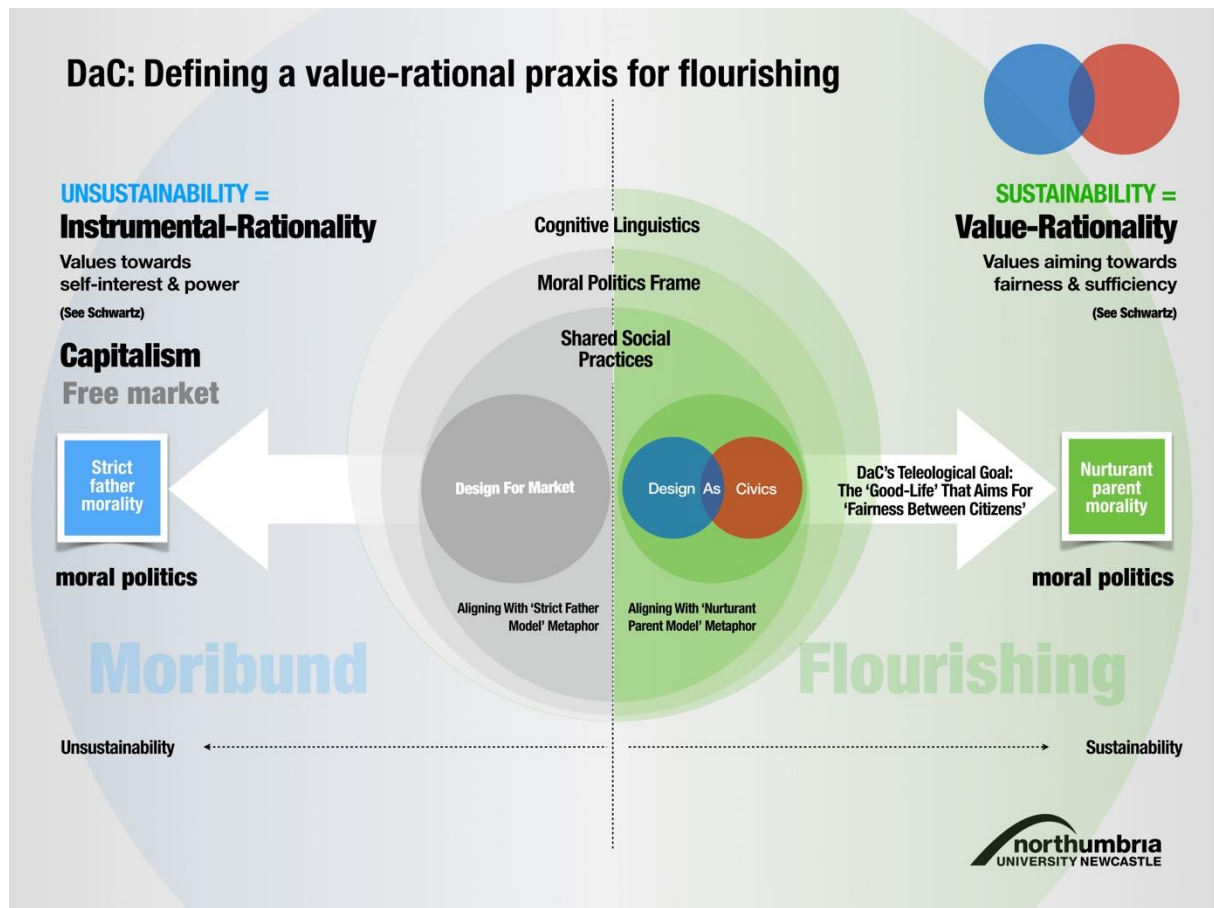
Figure 3: Positioning DaC as a value-rational practice integrating frames, values and the metaphors of moral politics

In Figure 5 we describe DaC's goal of the 'good life' and its steering 'aim' for FBC as preventing instrumental rational practices from being free of consideration of whether the action – its power – prevents FBC. For example, if one's ambition is towards instrumental rational self-enhancement (achievement and economic wealth in Figure 4) such self-enhancement changes towards value-rational ends, where wealth is an outcome and not the intended goal.

Figure 4: Aligning Values - Appreciation of human values informing value-rational practice of DaC

Recalling our earlier assertion, of design being amoral, and our use of DaC's principal principle value of FBC as the 'moral' metric to counter design's failing characteristic, we also recognise the difficulty that such thinking imposes upon DaC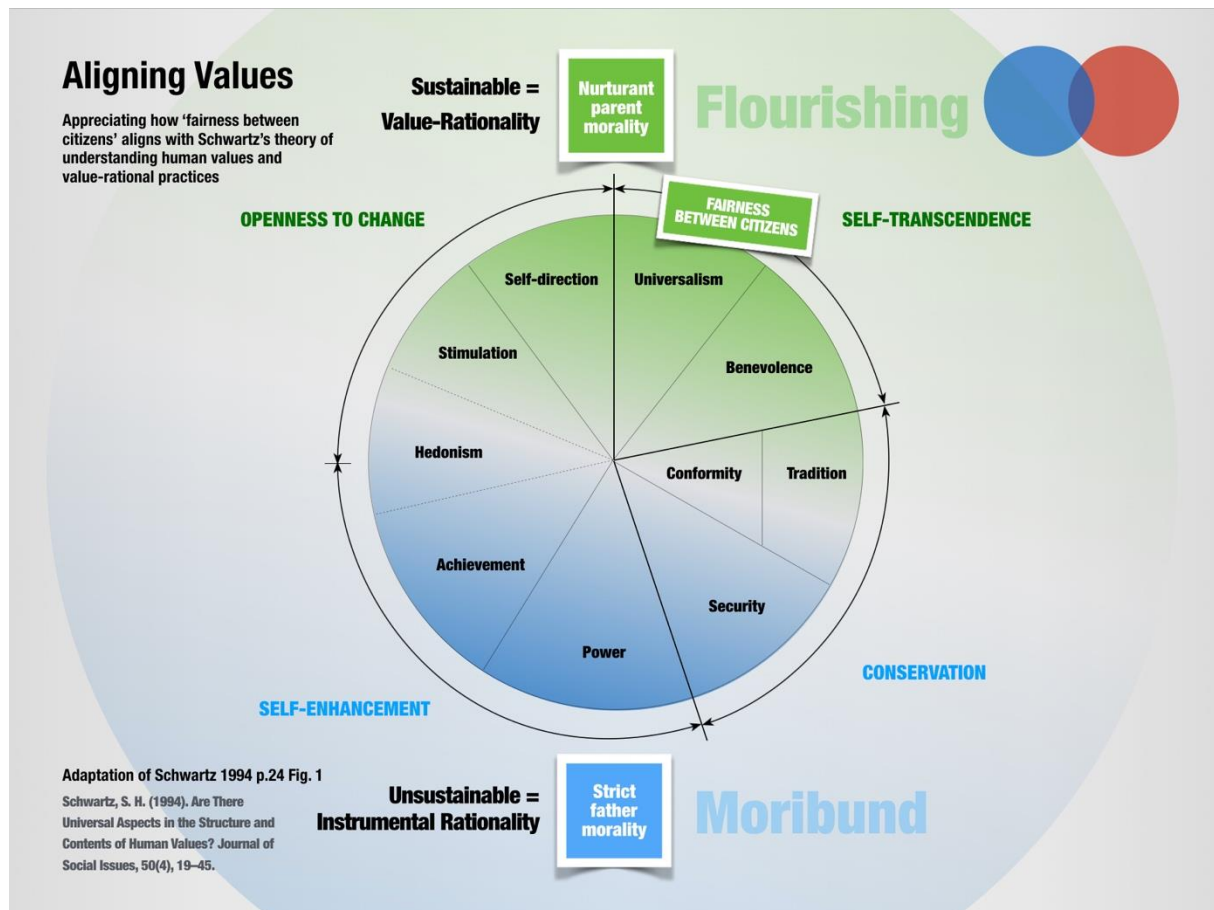 practice. We reconcile such challenges by integrating within DaC the appreciation of values, frames, moral politics and metaphors (Emmerson & Young 2017).

Psychology theorists, reports Schwartz, *"view values as the criteria people use to evaluate actions, people, and events"* (Schwartz 2006 p.0), while cognitive science reveals how we individually build our understanding of reality interpreting the metaphors (Lakoff 2002 p.145) and the frames they invoke within our reasoning (Schön 1979 pp.262 - 265). Significantly, DaC draws on of ideas of embodied cognition (Lakoff and Johnson 1999 p.19) to create our understanding. For example, that we '*grasp ideas'* and the term '*tax relief'* represent conceptualisations of embodied cognition's conceptual metaphors – of how our hands *'grasp'* and we seek *'relief'* from physical pain (Lakoff & Johnson 2003 p.3).

Consequently, we apply the conceptual metaphor 'mother' within DaC's theory. Mother is DaC's heuristic for assisting co-designers in their critical interpretation its moral principal principle value FBC.
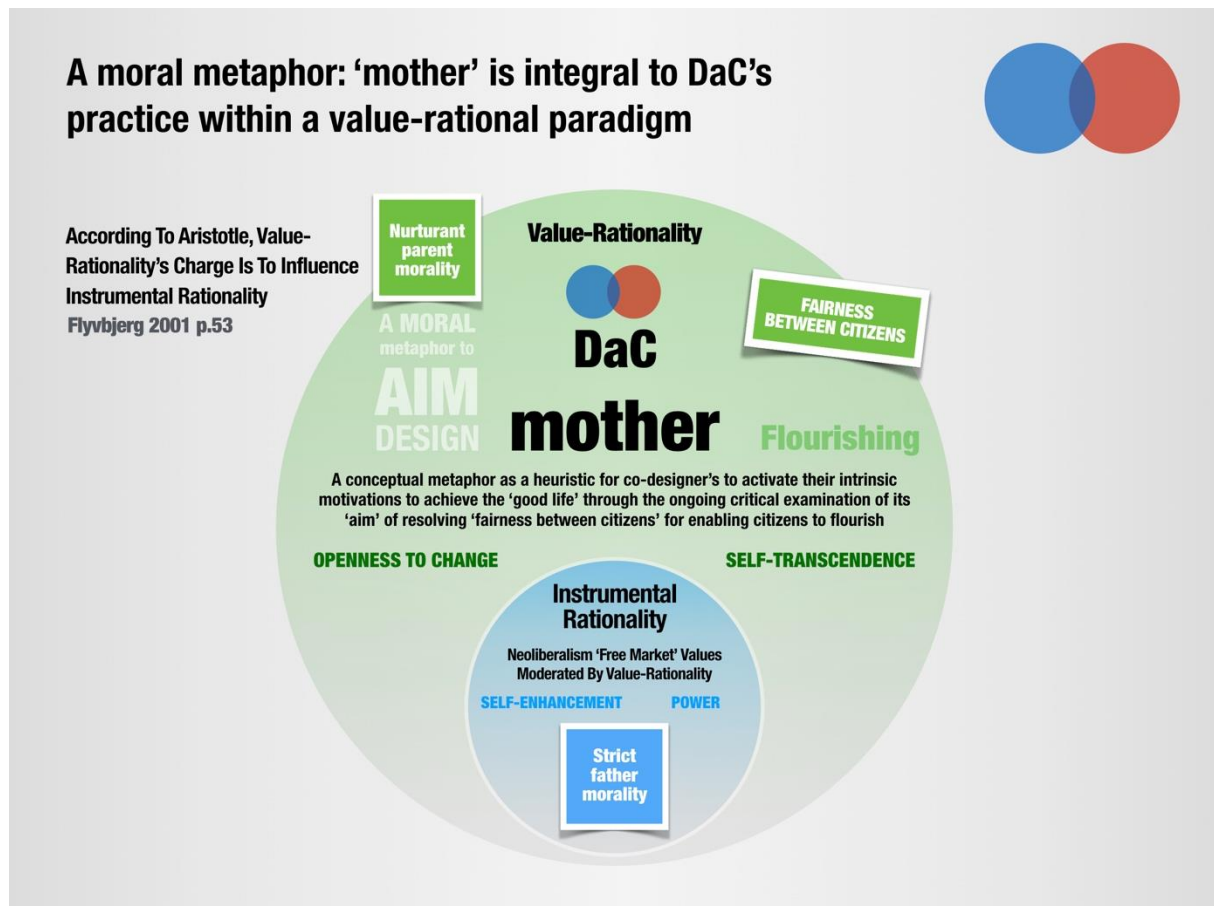
Figure 5 The value-rational of DaC controls the instrumental rational goals of capitalism.

Civics is for Aristotle the means for citizens to develop one's *"moral and intellectual virtues"* for delivering the 'good life' (Carr 2006 p.426). Almond and Verba reporting how civic culture is, *"based on communication and persuasion, a culture of consensus and diversity, a culture that permitted change but moderates it"* (Almond and Verba 1963, p.8).

Figure 6 part A defines civics as a praxis for understanding the City requiring the studying of its history, geography and occupations (economy) (White 1921, p.35).

In Figure 6 part B we appreciate DaC teleologically steering of its 'aim' for FBC through time as an ongoing dynamic process to deliver the 'good life.' Figure 5 - part C examines our incorporation of Isocrates's thinking regarding the teaching and practice of civics within DaC. Here, DaC as a praxis develops one's 'critical consciousness' (Freire 1974) through logos politikos – reasoned discourse about the city – leading to the ongoing developing skill of phronêsis.

Phronêsis, or 'practical wisdom,' is a stochastic art whereby one is able to aim at the right course of action – the 'good life' – in uncertain conditions (Poulakos 2004 p.54), our 'wicked problem' of sustainability. However, although the Ancient Greek's rationale of phronêsis is for revealing the 'good life,' it is, like design, amoral: *"it presupposes knowledge of ethically and political 'virtue'"* (Eikeland 2001 p.148).

Thus, within DaC, its moral position being the explicit principal principle value of 'fairness between citizen' provides the contemplative metric for citizens to steer their 'aim' towards and reveal the 'good life' using DaC's conceptual metaphor, 'mother,' as a heuristic to facilitate their thinking.

Figure 6 part D indicates DaC's appropriation of the educationalist Boyer's approach of engaged scholarship (Boyer 1990; 1996). Here used to articulate, clarify and make explicit the praxis and principles of DaC such that we share the knowledge generated and make it reflexively politically accountable to the City so that at the community's discretion, they can change its steering 'aim' to their requirements (Gibbons et al. 1994 p.3-4).
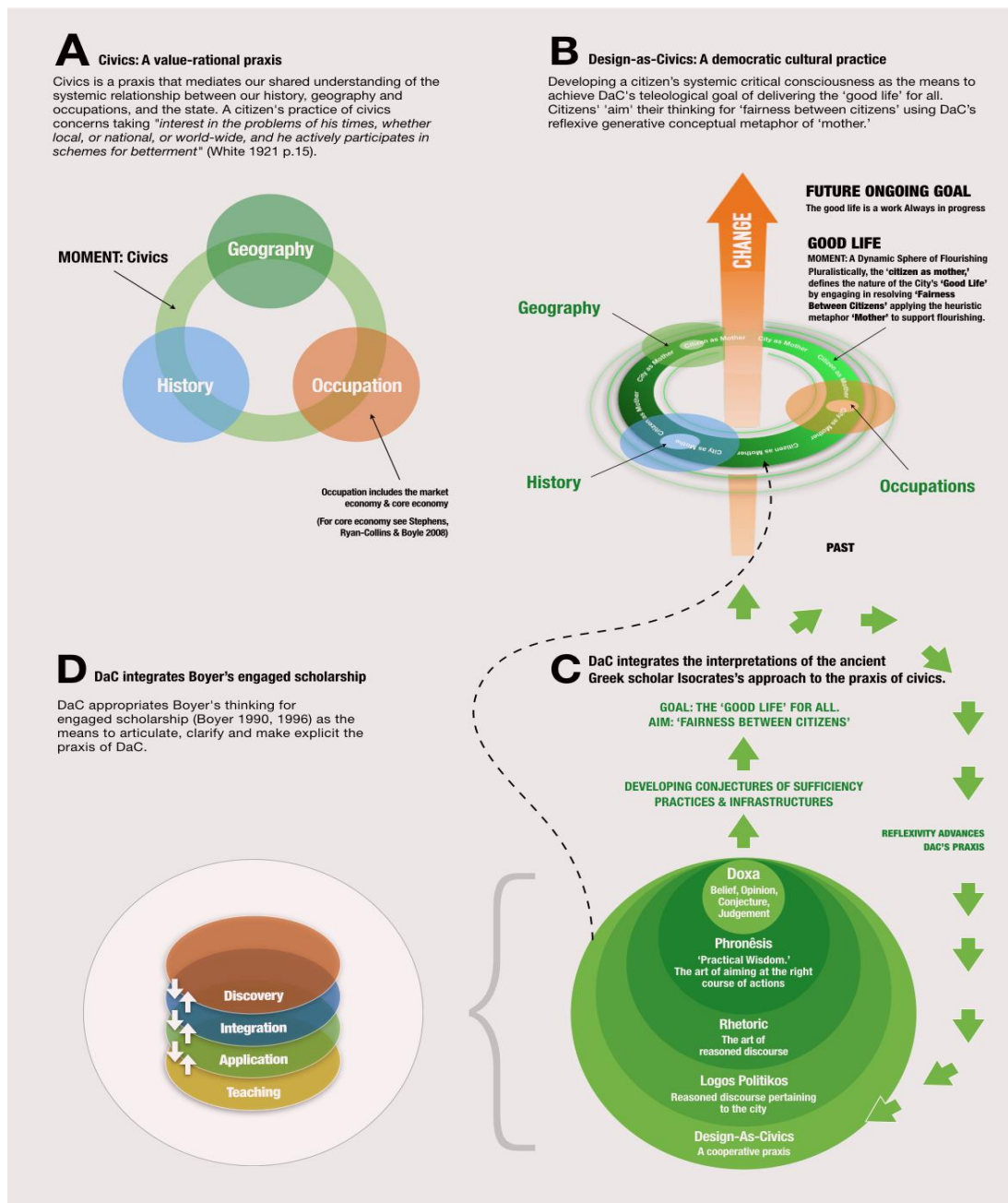

Figure 6: Overview of DaC – A value-rational praxis of citizens

6 Methodology & epistemology stance

We explore the conjecture of DaC applying the research through design methodology of critical design (CD) (Dunne 2005; Bardzell & Bardzell 2013 p.3297; Mazé & Redström 2009), our epistemological stance being pragmatism (Popa, Guillermin & Dedeurwaerdere 2014; Joas 1993).

We operationalise DaC as a CD praxis within the University's surrounding communities to facilitate *"a critique of the prevailing situation through designs that embody alternative social, cultural, technical or economic values"* (Dunne and Raby 2001 p.58). The designer researcher acting as a reflective practitioner and critical reviewer with the goal of generating Mode 2 knowledge (Gibbons et al. 1994 p.3).

Of note, DaC's theory distinctly addresses Bardzell and Bardzell's methodological concern, how do we judge whether our CD practice is critical and suited *"to change society for the better"* (Bardzell & Bardzell 2013 p.3297). We argue DaC answers their question by explicitly framing its principal principle moral value of FBC within its teleological goal of delivering the 'good life,' as the contemplative metric by which DaC practitioners constantly critically evaluating their conjectures.

7 Maker space

Our difficulties in operationalising DaC, of constituting publics (DiSalvo 2009) with local third sector organisations, lead to our partnering with City Library Newcastle (CLN) – a value-rational organisation – to design their 'maker space' facility (see Fab Foundation 2017), supported by Newcastle City Council (NCC). They aspire to help redress the UK's Digital Divide and provide citizen access to digital technologies like 3D printing alongside coding skills.

Conceptually, the 'maker space' provides the 'ready-made,' needed infrastructure (Stigendal and Östergren's in Emilson 2014 p.29), to support common-place orchestrations of DaC. Importantly, it indicates how DaC or alternative systems thinking design practices may scale through the library network worldwide.

Stating, '*We believe all citizens deserve a fair chance to flourish,"* six Northumbria University Design for Industry (DFI) 2nd and 3yr undergraduates, Dan, Ellis, Joe, Jordan, Harvey and Malikah join the maker space project as co-designers for a twelve-week assignment.

DaC's pedagogy starts with developing our 'critical consciousness' of our City through habituating ourselves in the exploration of its history, geography and occupations (White 1921) (Figure 6 B). A contextmapping approach (Visser et al. 2005) incorporating appreciative enquiry (Cooperrider et al. 2001), informed by Ryan and Deci's self-determination theory (Ryan & Deci 2000 p.68) shapes DaC's social enquiry questions.

Introducing twenty open-ended contextmapping questions, (Figure 7), informing the co-designers there is no right or wrong answers; they survey the City capturing their interpretations, experiences and feeling as photographic records. One co-designer, Ellis, is sceptical. He is uncertain of the new approach and whether his responses will be 'right.'

Figure 7: Example contextmapping questions

Placing each co-designer's photographs with the corresponding question on a quickly arranged group of desks, we collectively ask '*what do our photographs mean?*

Contextmapping Reflections: Developing **intersubjectivity**.
The co-designers **listening** and **reflecting** on how everyones thinking changes

Figure 8: Contextmapping reflexive discussions. The standing nature of the co-designers allowing them to move physically in and out of the discourse.
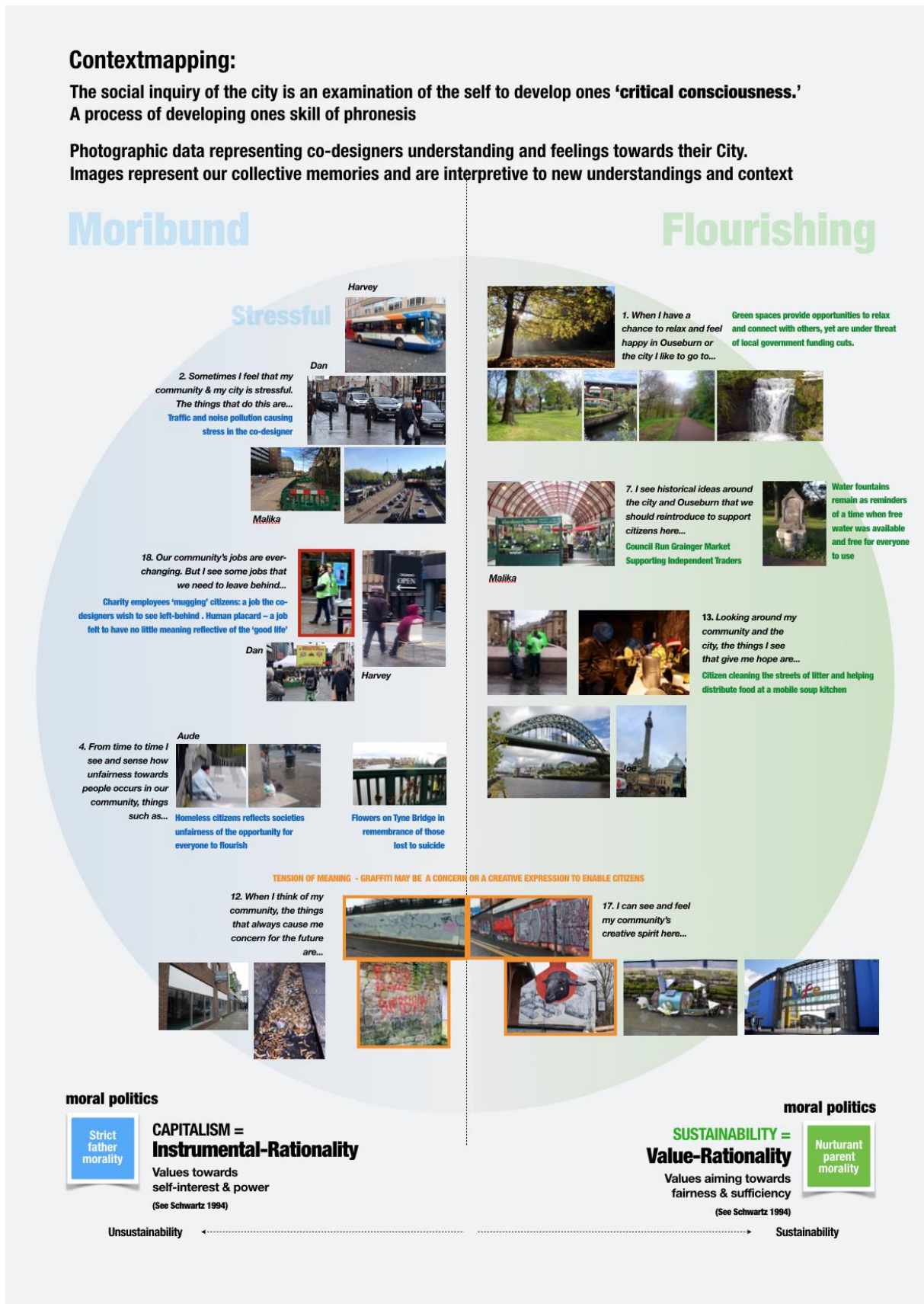

Contextmapping:

The social inquiry of the city is an examination of the self to develop ones **'critical consciousness.'**
A process of developing ones skill of phronesis

Photographic data representing co-designers understanding and feelings towards their City.
Images represent our collective memories and are interpretive to new understandings and context

Moribund

Flourishing

Stressful

Harvey

1. When I have a chance to relax and feel happy in Ouseburn or the city I like to go to...
Green spaces provide opportunities to relax and connect with others, yet are under threat of local government funding cuts.

Dan

2. Sometimes I feel that my community & my city is stressful. The things that do this are...
Traffic and noise pollution causing stress in the co-designer

Malika

7. I see historical ideas around the city and Ouseburn that we should reintroduce to support citizens here...
Council Run Grainger Market Supporting Independent Traders

Water fountains remain as reminders of a time when free water was available and free for everyone to use

18. Our community's jobs are ever-changing. But I see some jobs that we need to leave behind...
Charity employees 'mugging' citizens: a job the co-designers wish to see left-behind . Human placard – a job felt to have no little meaning reflective of the 'good life'

Malika

13. Looking around my community and the city, the things I see that give me hope are...
Citizen cleaning the streets of litter and helping distribute food at a mobile soup kitchen

Dan

Harvey

Aude

4. From time to time I see and sense how unfairness towards people occurs in our community, things such as...
Homeless citizens reflects societies unfairness of the opportunity for everyone to flourish

Flowers on Tyne Bridge in remembrance of those lost to suicide

Joe

TENSION OF MEANING - GRAFFITI MAY BE A CONCERN OR A CREATIVE EXPRESSION TO ENABLE CITIZENS

12. When I think of my community, the things that always cause me concern for the future are...

17. I can see and feel my community's creative spirit here...

moral politics

| Strict father morality | **CAPITALISM =** **Instrumental-Rationality** Values towards self-interest & power (See Schwartz 1994) |

moral politics

| **SUSTAINABILITY =** **Value-Rationality** Values aiming towards fairness & sufficiency (See Schwartz 1994) | Nurturant parent morality |

Unsustainability ⟵⟶   ⟵⟶ Sustainability

Figure 9: Contextmapping photographs generate the co-designers shared understanding of themselves, the group and their City

Figure 9 depicts a range of the co-designers contextmapping responses in nearly two-hours of discourse. Our unfolding discussion exposes where we hold agreements, similar positions, and tensions, true to the method's intention: to reveal everyone's voice and build our shared understanding of our self, each other and the City.

For example, the opposed questions (Figure 9 Q1 & Q2), *'where do I relax and feel happy, verses, where to do I feel my City is stressful'* provides clear insight. A majority of the co-designers found green spaces inviting, offering space for reflection or sharing time with others. Conversely, the co-designers feel stress is in 'polluted' spaces: polluted with noise from building works and road traffic, and discarded litter and discarded cigarettes.

Tensions are apparent on discussing the nature of graffiti. Is it stressful, a sign of creativity, or both? No one answer is thought correct, just differing viewpoints. For Jordan, the graffiti *"looked messy,"* while for Ellis they were 'meaningful.'

Importantly, both viewpoints evidence how DaC's exposes how opposing views are held, listened to, and importantly respected. Significantly, from uncertainty, Ellis, reflecting, now recognises the value and understanding his input contributes to the group's discourse and appreciation of the City.

Significantly, our appreciating of DaC's functioning – the changing the co-designers design practice – is also recognised by the other co-designers. Jordan, reflects on Ellis's change, he notes;

"I think he (Ellis) is this perfect example for your purposes. Of how it works (DaC). Because he said like he did not find anything interesting, didn't he. And he was talking and talking about it."

Whereas Dan, reflecting on the value and power of contextmapping, says,

"Nothing changed in those photos apart from when you get four (five) people talking about it - suddenly there is everything to talk about... there is just something about going from a single person to a small group that just opens up so much insight."

We see here how the interventions are activating the co-designers 'critically consciousness.' Their photography and group discourse is informing and shaping their thinking with the potential to change their City for the better.

8 Integrating DaC's conceptual metaphor 'mother.'

In our overviewing DaC's theory, we recognise the complex interconnected relationship between metaphors, frames and moral politics. How their interweaving affects our reasoning, actions (Emmerson & Young 2017; also see Schön 1993 pp.262 - 265; and Lakoff & Johnson's 2003 p.158) and our steering towards the 'aim' of FBC.

    DaC's navigational compass is the explicit moral rationale of FBC. To frame DaC (Figure 5) and assist its critical interpretation by designer's as they develop their phronêsis, we integrate the heuristic conceptual metaphor, 'mother,' the co-designers' insights depicted in Figure 10.
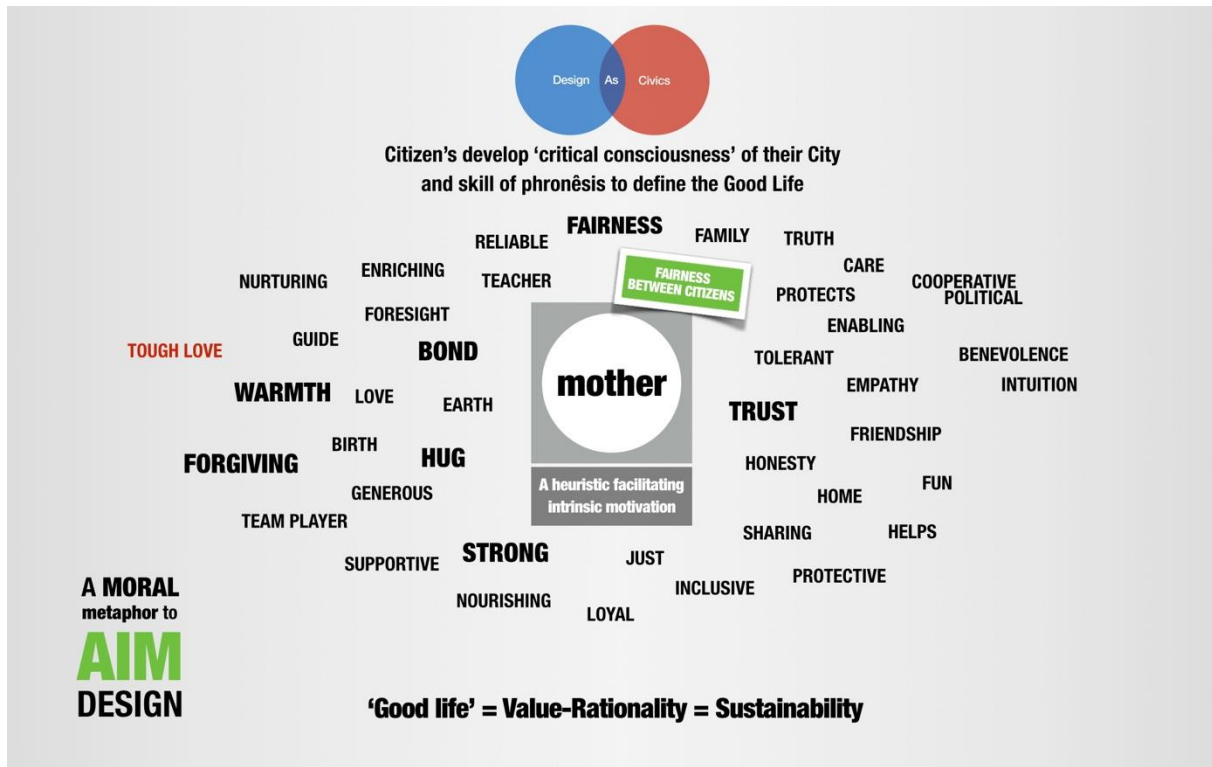
Figure 10: Co-designers map the conceptual metaphor 'mother' to 'DaC' the process enabling the co-designers' self-determination (Ryan and Deci 2000) in generating their conception of FBC within their praxis

9 Maker space development

Gaining permission to work full-time insight in the former crèche, maker space's size represents a new understanding of designing experiences for the DFI co-designers.

Figure 11: City Library Newcastle and the potential maker space room

The co-designers initial work focuses on trying to appreciate the services maker space can deliver to meet the expectations and desires of Newcastle's citizens. This focus led the group experiencing the discomfort of being unfamiliar with the solution they were trying to deliver, relying, initially, on undertaking online web searches to 'pick' an existing design approach they felt suitable.

On being questioned about their approach, the co-designers recognised their lack of experience and the need to view rich examples of interior design spaces. Dan, ultimately suggests the Alan Shearer Centre (ASC) as a destination to gain valuable insights. Designed for the disabled, ASC provides outside grounds and multiple sensory rooms that integrate lighting, sounds, textures and visual attraction units such as tall clear water tubes with air bubbling though, to both calm and stimulate their visitors (Figure 12). The group becomes aware of the need to design the meaning of the experience and not the 'furniture'. However, translating such insight is initially problematic.
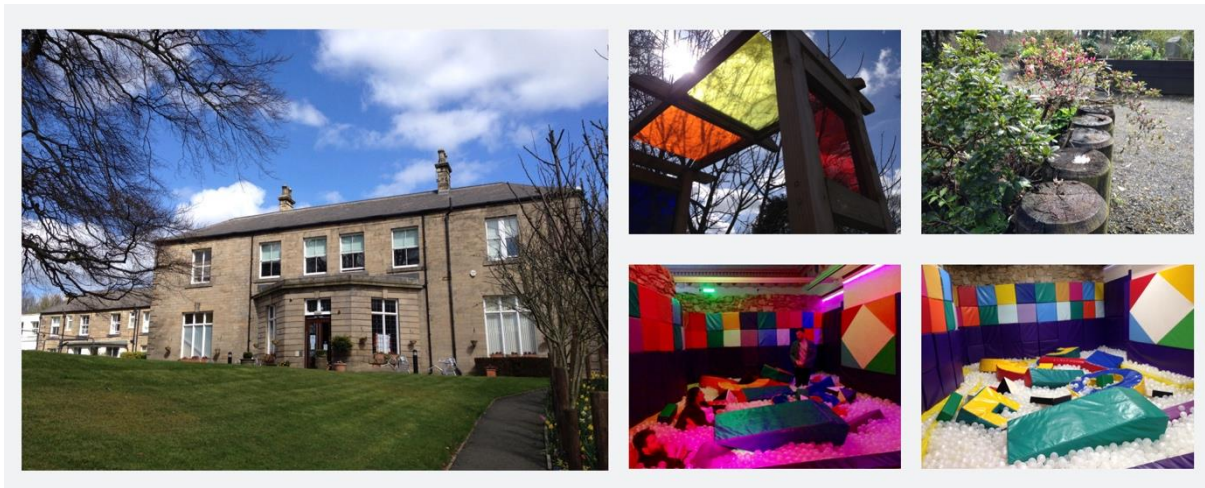
Figure 12: Visiting the Alan Shearer Centre, a local facility providing sensory activities for disabled individuals
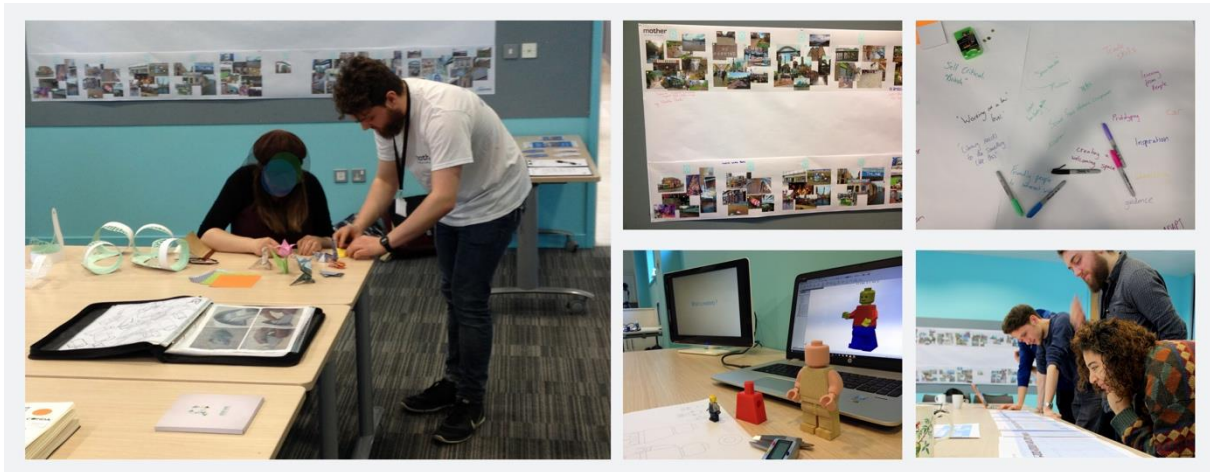

Figure 13: Public open day at City Library Newcastle to discuss maker space

During their arranged open day, the co-designers spoke to library users to introduce and question how maker space may provide support. Responses ranged from 3d prototyping for a new jewellery design business and learning how to computer code. Moreover, as relevant to maker space's functioning, comments indicated how the room (and the library) is needed to enable people to feel proud of their City – its an expression of the citizen's values.
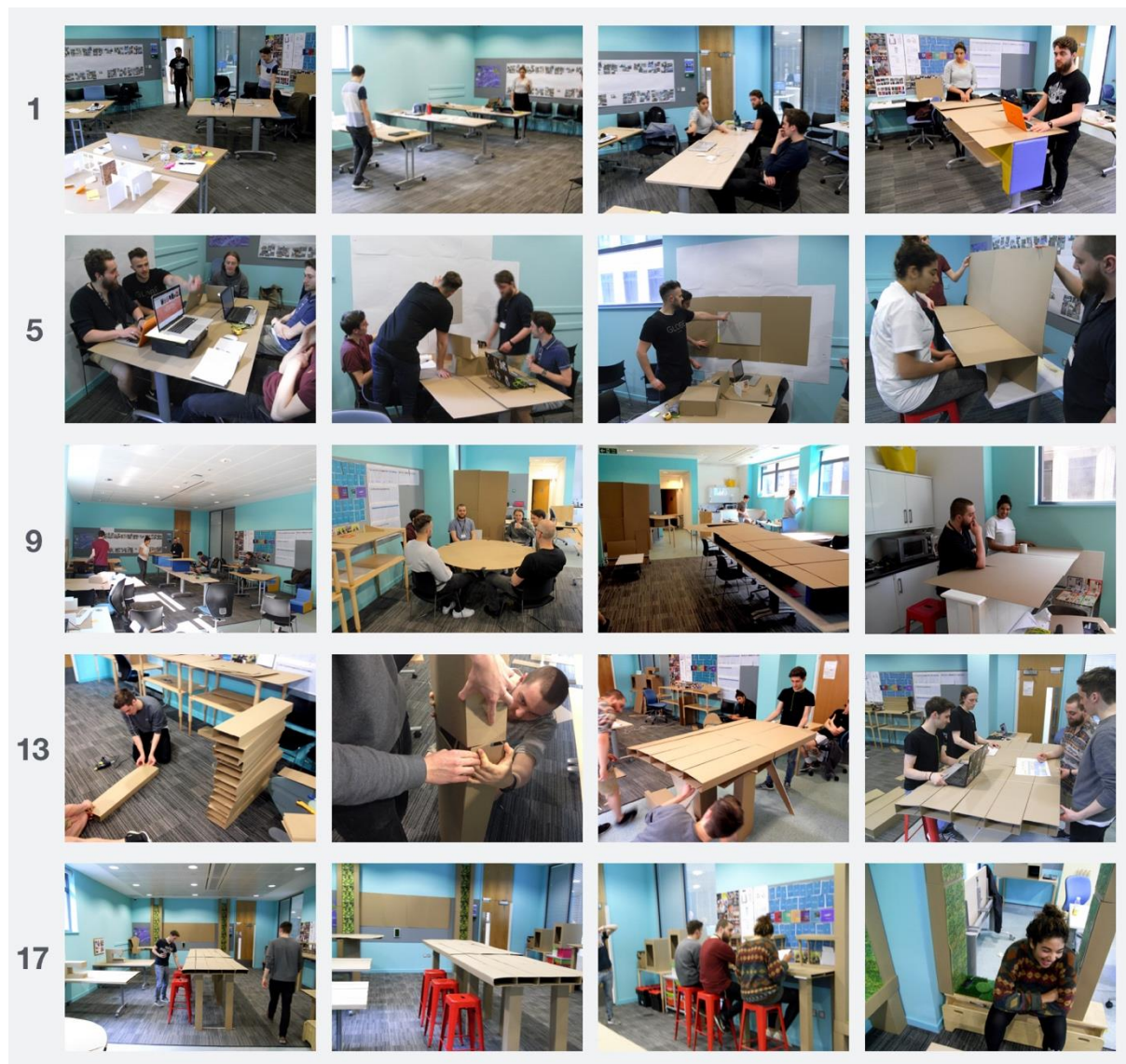
Figure 14: Co-designers developing the maker space leading to the making of a full-size cardboard mockup.

The co-designers' appreciation of the rooms physicality starts by arranging the left behind office desks into multiple workspace layouts (Figure 14 - 1-3). However, evaluating the rooms feeling, *'do we feel warmth'* – an embodied cognition understanding of DaC's metaphor mother – the group determine its unfriendly. Malikah dramatic exclaiming how it is a *'sweatshop!'*

Their thinking is limited when working at this large scale. Only after we introduce corrugated cardboard sheet full-size prototyping, are the co-designers enabled to move forward. Making, in some form, is essential for experimenting as to what can be. The designers continue to negotiate how the space 'feels' warm and welcoming to users. Ultimately, the use of flat cardboard leads to our pushing the co-designers a little further: To make their designs full size by developing a cardboard tube construction method (Figure 14. 13-10)

Figure 15: Makerspace prototype made from corrugated cardboard converted to form modular parts. The students walking and situating themselves in the space, sense-making with their bodies to 'feel' their 'feelings' towards their design.
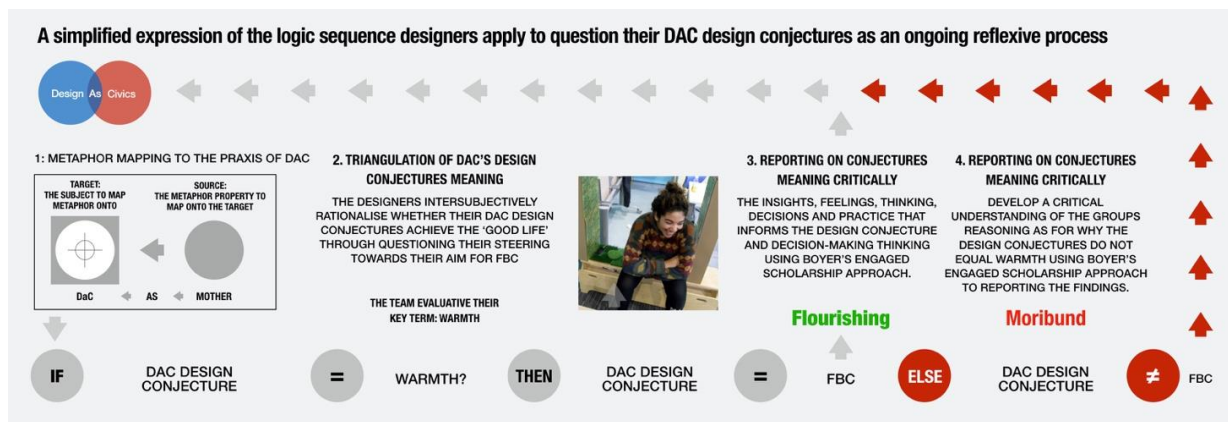

Figure 16: The co-designers apply their interpretation of DaC's conceptual metaphor 'mother' to critically question their DaC conjectures using their embodied cognition.

Figure 17: The full-size prototype design reflects the co-designers' interpretative understanding of FBC.

Figure 17 depicts our final design. It integrates the co-designer findings derived throughout the project. To the rear of the room, we incorporate a living wall reflecting spaces that are relaxing yet rich to experience. We note here our goal of expanding the living wall's outlook as a local food growing project. One integrating electronics (automatic watering), computer coding, upcycling and making, all potentially conducted within maker space. Front left is a vertical column chalk graffiti wall, while the co-designers central table is designed to use reclaimed wood, such as railway sleepers, and be manufactured by local makers, representing how FBC equates to circular economy thinking.

10 Discussion

We started this paper stating how our actions arrest the 'good life' for citizens globally due to the absence of fairness between citizens arising out of living within capitalism's instrumental rational paradigm, the power creating our unsustainable culture.

We argue our response transcends capitalism's instrumentalism as DaC's foundations – the synthesis of design and civics – encompasses capitalism's instrumental rationality within a value-rational paradigm. Additionally, within DaC's theory, we integrate insights from cognitive science and

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linguistics – frames and metaphors – and of developmental psychology revealing humankind's normative behaviour value of fairness, which we contend redresses design's amoral nature and lack of systemic perspective. Their inclusion within DaC is essential; they enable citizens to steer its practice critically.

Thus, DaC agrees with Margolin's contention, that; *"design theory at its most fundamental ought to be a theory of how design does and might function in society rather than simply a theory of techniques"* (Margolin 2002 p.238). Additionally, it aligns with Ison's specifications for systemic enquiry (Ison 2010 p.243).

DaC is a practical philosophy: A reflexive value-rational, systemic radical political praxis for citizens possessing the teleological goal of delivering the 'good life,' through critically interrogating their City's steering towards the 'aim' of achieving fairness between citizens.

We report in the project maker space, a group of undergraduates successfully operationalising DaC. Limited yes, but as undergraduates, they develop their critical consciousness of their City and knowledge of themselves. They engaged with library users, undertook experiential learning site visits, interpreted a conceptual metaphor that enabled their reasoning to express the value of FBC as the embodied cognition of 'warmth,' to form a design conjecture representing their overall conception of FBC.

However, ongoing practice is a necessity to sustain the co-designers' habituation of DaC, their phronêsis. Universities provide opportunities, but existing design pedagogy is unsuited to incorporating DaC's values. Alternatively, value-rational organisations like the global public library network are, we believe, a viable opportunity for committed designers to scale DaC's practice with citizens.

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