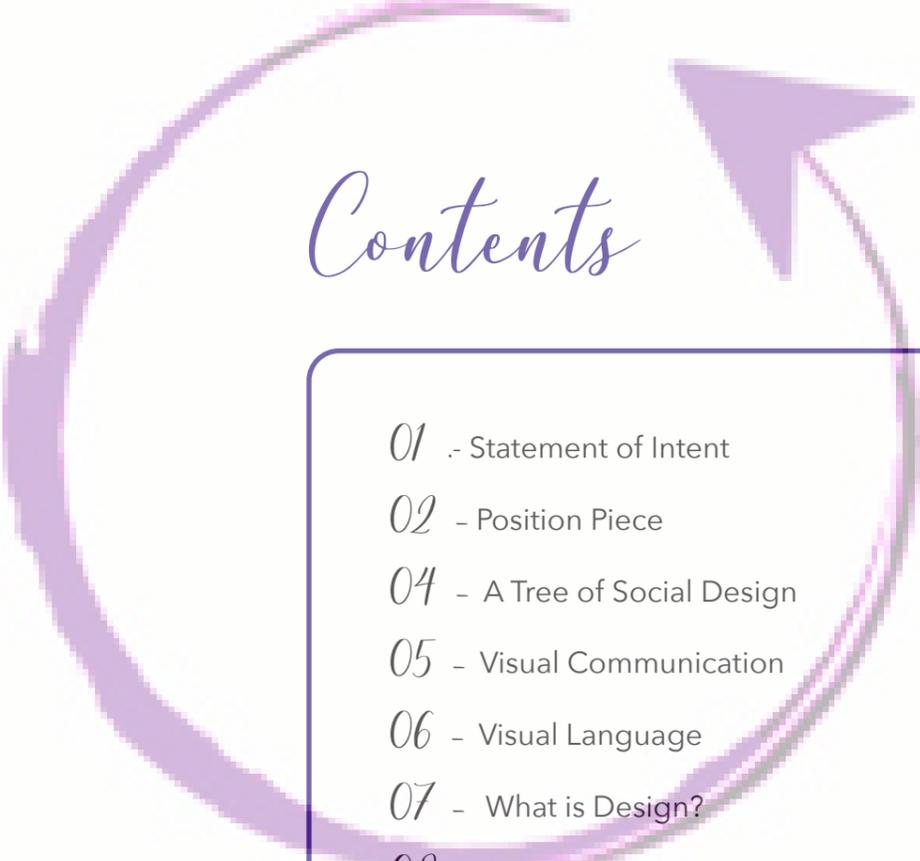


*Adopting Radical Design
Modes to support
Equality and Inclusivity
within Sport and Social
Activity.*

Helen Adams

Brighton University | 2022

Radical modes of design culture and practice | ADM30



Contents

- 01 - Statement of Intent
- 02 - Position Piece
- 04 - A Tree of Social Design
- 05 - Visual Communication
- 06 - Visual Language
- 07 - What is Design?
- 08 - What is Design - Translated
- 09 - Justice within Design
- 10 - Mobility Justice
- 11 - Design for Inclusion
- 12 - Design for exclusion
- 13 - The Intersection
- 14 - Adopting Reflection as a mode of design
- 15 - Empathic Design
- 16 - Transgenerational design
- 17 - Collaboration for Design
- 18 - Interspecies Co-design
- 19 - Conclusion
- 20 - Bibliography
- 22 - Images

'Sometimes, customers are so accustomed to current conditions that they don't think to ask for new solutions - even if they have real needs that need to be addressed'

- Dorothy Leonard and Jefferey F. Rayport

Statement of Intent

Standard techniques of enquiry rarely lead to truly novel concepts¹, and so radical modes of research and design need to be employed to spark radical and sustainable change. Where current design solutions simply are not working, we can use these concepts to confront others with current challenges, thereby disrupting the status quo², and create design solutions to inspire and change³, however, to do this we need to 'provide meaning, agency and direction.'⁴

In this workbook I will be exploring examples of radical design modes within the context of my chosen field, and in response applying them to my position piece, which is a visualisation of how we could challenge discrimination and alienation of marginalised groups within activities at a community level. My model works to address equality and inclusivity by creating a format for other more important elements that should be discussed.

1 Dorothy Leonard and Jefferey F. Rayport, 'Spark Innovation through Empathic Design' Harvard Business Review, November 1997 DOI: 10.1142/9789814295505_0016

2 Chris Reidy, 'Storytelling Practice in Transformative Systems' In book: Storytelling for Sustainability in Higher Education: An Educator's Handbook pp.71-87 Routledge, 2020

3 Reidy, 'Storytelling Practice in Transformative Systems' pp.71-87

4 Reidy, 'Storytelling Practice in Transformative Systems' pp.71-87

Position Piece

This theoretical solution is my response to exploring the different modes of design within the context of my chosen field and is an example of how we can begin to draw upon them to create a more equal and inclusive social activity. In this workbook I challenge the current alienation and exclusion of not just riders with disabilities but other social situations as well, through critique of radical design examples, some of which highlight how sports and social activities are still not inclusive spaces within communities, despite past attempts at design solutions being put in place.

When adopting user-centred design modes, it is important to not see groups with disabilities as special cases with special needs as the current solution to this equine system does, but people whose requirements should be considered and incorporated as an equal part of the design process. Employing visual communication as a design tool I have incorporated and communicated everyone's position and stories within an equal system.

In this visualization, I aim to achieve the narration of 5 simultaneous stories, some more complex than others but all equal in importance, whilst communicating clear information to provoke a rapid response.



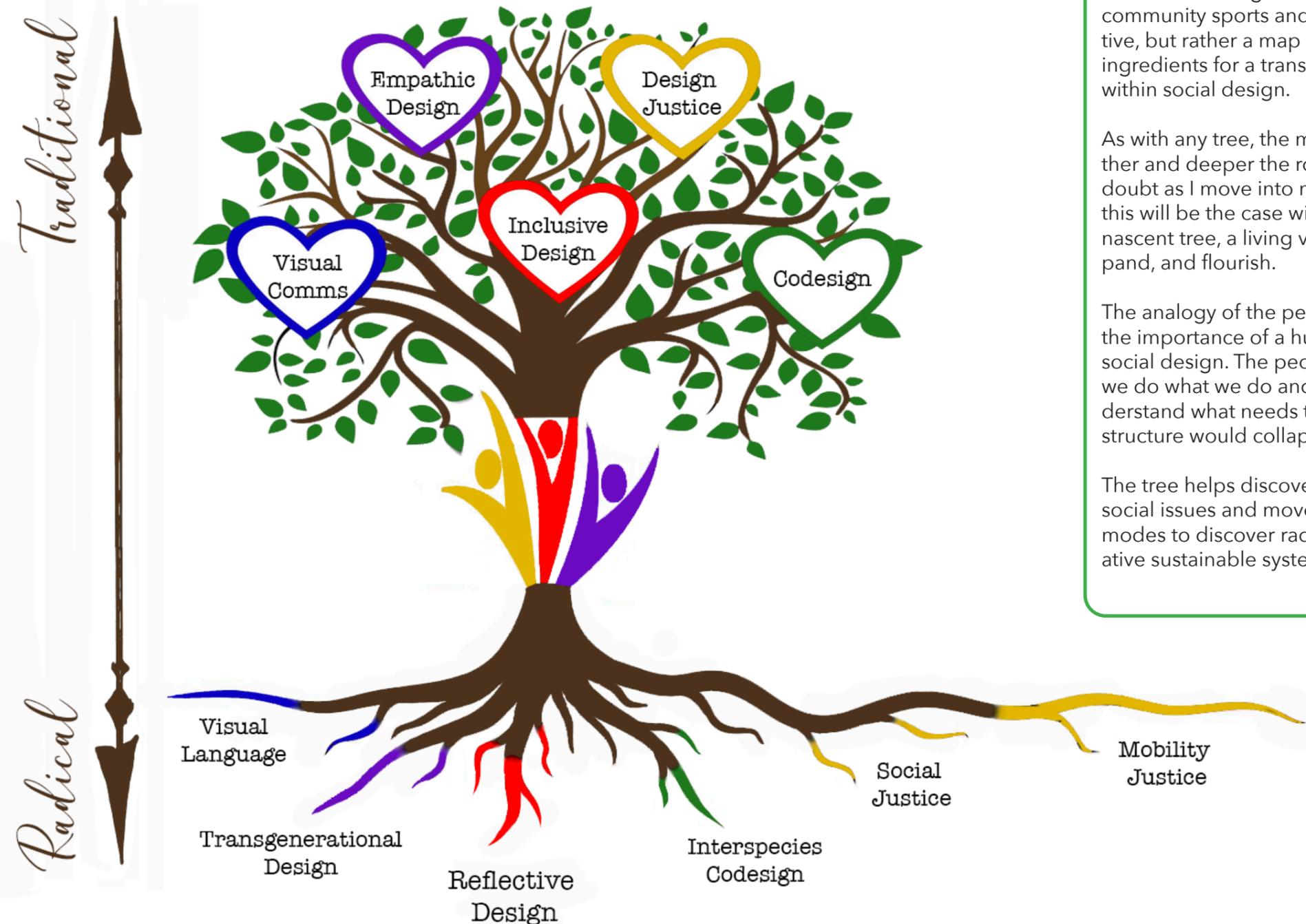
Everyone has a story to tell

Fig 1 | An example of how we can adopt radical design modes to begin tackling exclusion within sports & social activities
Authors own Artwork

'We can no longer claim to live in a world shaped by nature, but in a designed and constructed environment, shaped by human beings'⁵

Therefore, could we argue that, intentionally or not, design has contributed to systemic oppression? The systems through which we live our lives that disadvantage people based on their identity (ability, culture, race, gender, sexuality etc) and create exclusion within social activities. Taking this standpoint into account, should we then also look towards radical design modes to create more sustainable social systems where the worlds of all these groups can work together to make inclusive societies?

A Nascent Tree of Social Design



This tree is a representation of my current position within design and how I view social supportive design within the context of my current work. Through these roots we can begin to challenge social systems within community sports and activities. This is not exhaustive, but rather a map of what I see as the important ingredients for a transformative sustainable future within social design.

As with any tree, the more time it is given the further and deeper the roots would spread, and I've no doubt as I move into my Studio and Masters modules this will be the case with my tree, therefore this is a nascent tree, a living visual with room to grow, expand, and flourish.

The analogy of the people as the trunk, is to denote the importance of a human centred approach within social design. The people are the support, the reason we do what we do and the only way we can truly understand what needs to be done. Without them, the structure would collapse.

The tree helps discover the root cause of problematic social issues and move deeper into traditional design modes to discover radical ways of creating transformative sustainable systems within a changing society.

Fig 2 | A nascent Tree of Social Design
Authors own Artwork

Visual Communication

On initial research, creating inclusive spaces and increasing inclusive awareness appears to be dominated by visual aids and visual communication within design. (Fig.3) Not only does reading take time, but a large number of people have trouble reading, and the more complex the syntax the more people we are excluding, creating a tension against what we are trying to achieve within this work. Visual syntax is a rapid way of communicating narrative, however, comprehension can be subjective due to our individual perceptions. 'Perception theory' is defined by Ann Marie Barry as the theory of how the brain derives meaning from what it sees, the impact that visual images have on us personally and as a culture, and how visual images can be manipulated to achieve desired outcomes. 'Simply stated, this perceptual approach to communication theory acknowledges the power and primacy of unconscious emotional processing and particularly targets visual communication as a process dependent on automatic action-based systems of response.'⁶ We look through our eyes, but we see and convert meaning through our brains⁷, giving opportunity for deeper rapid narrative within design and offering opportunity to instigate radical change in behaviours.

⁶ Ann Marie, Barry. Perception Theory: A Neurological Perspective on Visual Communication, in Handbook of Visual Communication, second edition, ed. Sheree Josephson et al. London: Routledge, 2020 P.3

⁷ Barry, Perception Theory: A Neurological Perspective on Visual Communication, P.3

Fig. 3 | Inclusive Poster Design
<https://www.etsy.com/uk/listing/1085575010>



Inclusive Design

This example has used multiple communicative design strategies, as well as simple text, to create an inclusive message:

- The strong universal code of collaborating multiple colours to convey inclusive spaces.
- The use of multiple colours also stands for the support of the LGBTQ community
- A spectrum of skin tones communicates racial inclusion
- Hearts are a symbol of compassion, caring, understanding, courage and life-giving It is the symbol for love

Design Justice

This poster is intended to create inclusive spaces for minority groups and the communicated message of understanding and acceptance within the work also inspires me to 'think, learn and engage'⁸ with root issues, making this an example of radical design through visual communication.

My only criticism with this model would be that it could make someone feel alienated by having a poster highlighting their differences, and we could ask ourselves 'is it a truly inclusive space if it promotes and points out peoples differences?' Maybe this is an idealistic view and we still have a long way to go before this is the case.

⁸ Sasha, Costanza-chock, Design Justice, Massachusetts: The MIT Press, 2020 P.15

Colour perception within Design

We view the world in contrast and colour and therefore we perceive the world through image and colour. Ulf Klarén's model for describing how we perceive and understand colour through experience, discusses how direct and indirect experiences influences and instil colour meaning into our subconscious.⁹ We can therefore see that as text and images, colours can have content, and so adding colour code to an image can support a powerful instant narrative.

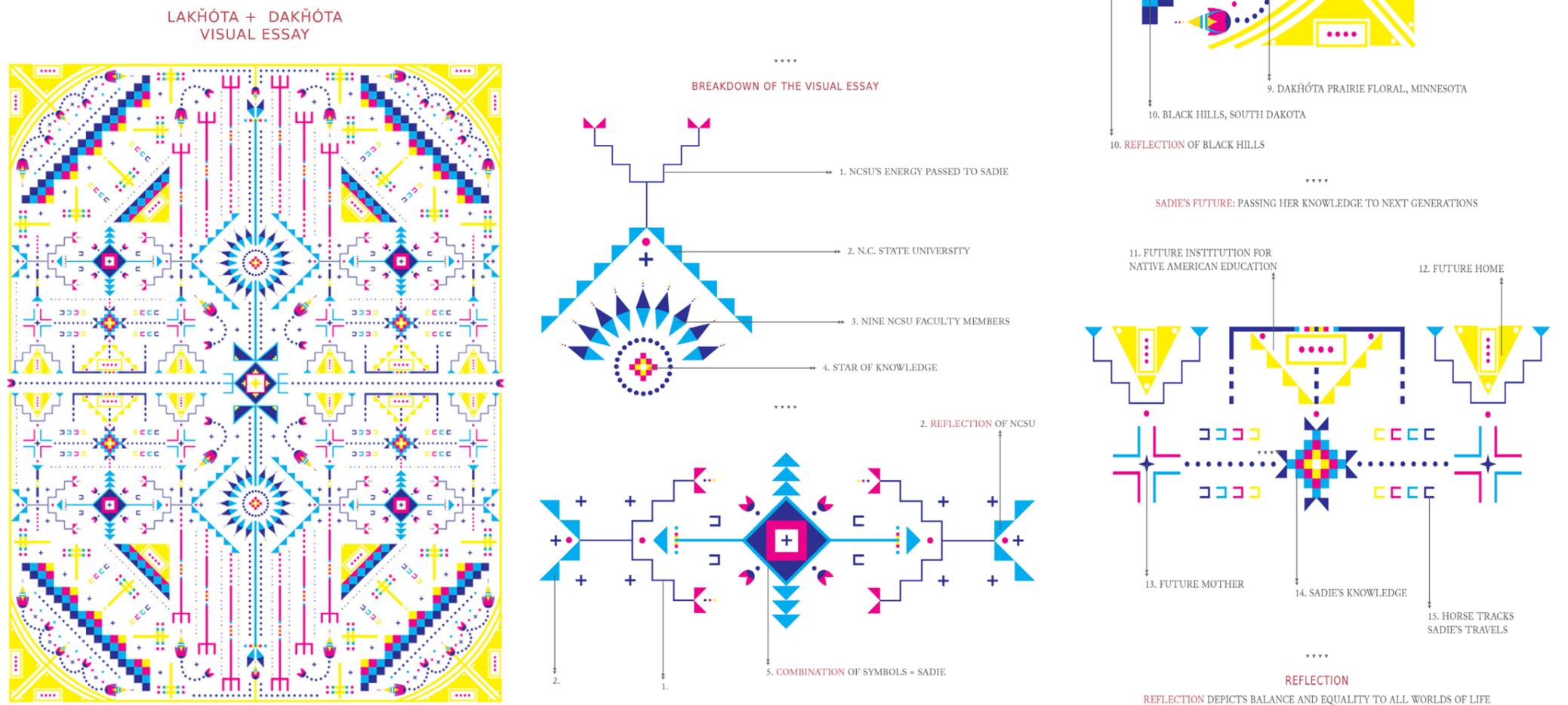
⁹ Ulf Klarén and Karin Anter, Seeing colour, in Colour and design, ed. Marilyn DeLong, Barbara Martinson, London: Bloomsbury Publishing P. 3-17

Visual Language

In a conversation with Sally Sutherland¹⁰ she posed the question 'How do you see the difference between visual communication and visual language?' My first response was that there is only a fine line, visual communication talks to us and tells us things, so it's a language (and is why I originally included visual language within this work)..... however on reflection and after critiquing these examples in more depth I take back that response and offer this revised analysis: The difference between them is that visual communication as seen above, visually give you strong clues but ultimately leaves you to infer the message, whereas visual language as we see here, uses symbols that directly translate to tell us the narrative. Therefore I would suggest that visual language IS also visual communication, however visual communication IS NOT a visual language.

Lakota is a Siouan language spoken by the Lakota people of the Sioux tribes. This example of Sadie Red Wing's work (Fig. 4) is a visual essay, drawing on cultural conventions and going back to indigenous roots to represent a narrative in the context of its history, depicting her journey through North Carolina State University by using the Lakota shape grammars and commands she defines in her library of visual Lakota conventions.

¹⁰ Sally Sutherland et al. Group Tutorial. Online. January 27 2022.



Design Justice

This work uses original historic symbolism in the place of text, showing a deep cultural respect within her story, and giving context to the work.

The use of rich visual language from minority groups, which have often been subsumed or ignored by mainstream design's bias toward western modes of communication, gives voice and context to underrepresented communities by bringing them into main stream design and promoting the beauty these cultural conventions can create.

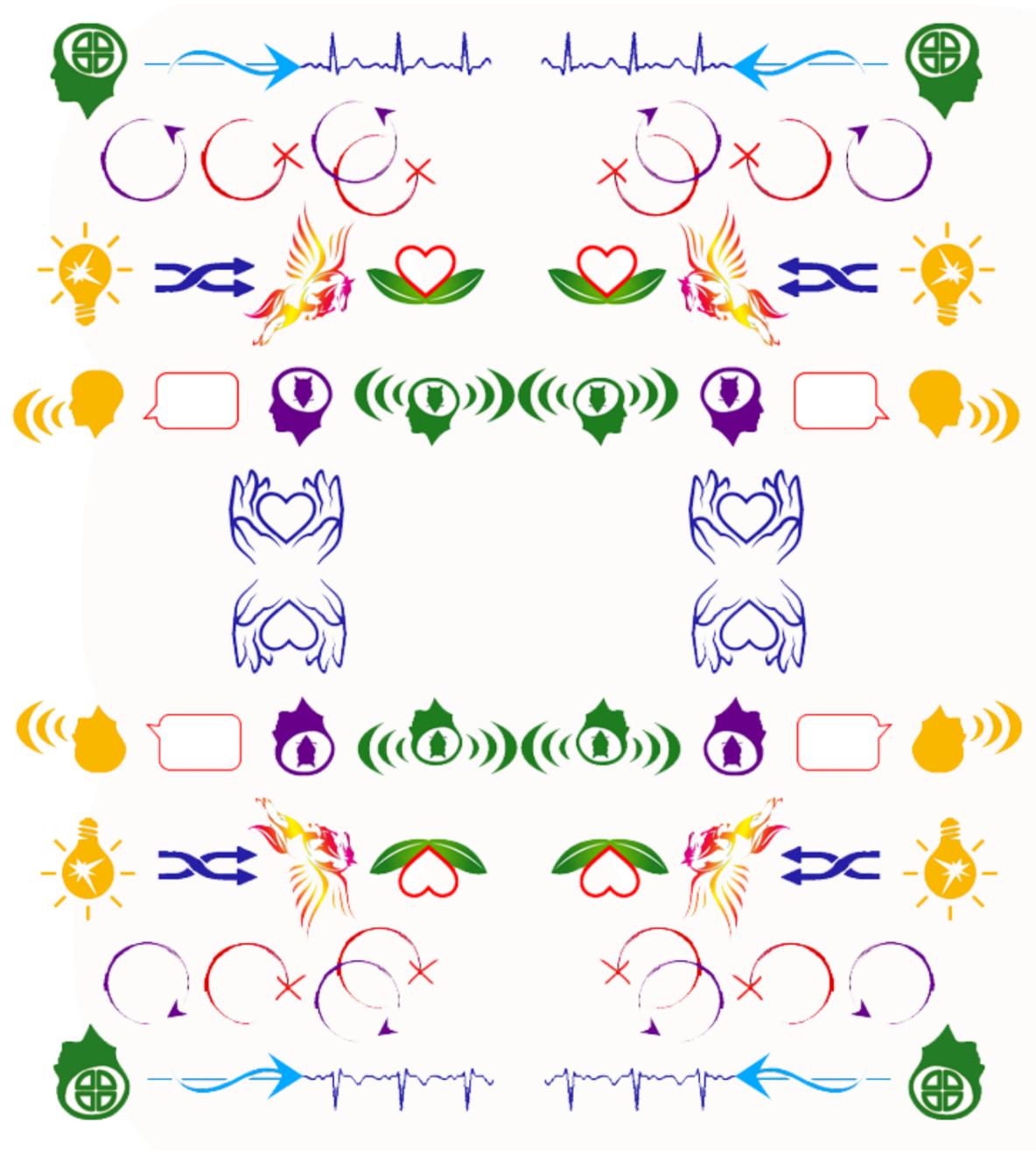
Visual Storytelling

'Stories have power. Much of this power stems from the close connection between stories and evolution of our cognitive processes.'¹¹ I think the collaboration Red Wing has used here of ancient tribal symbolism to tell her own more recent story, captures the attention beautifully and evokes powerful feelings of a rich and meaningful narrative.

¹¹ Reidy, 'Storytelling Practice in Transformative Systems' pp.71-87

Fig. 4 | Red Wing Visual Essay
<https://www.sadieredwing.com/copy-of-new-page-1>

What is Design? | A Visual Language Representation



My interpretation of design: 29.01.2022

Edition: 9

Due for review

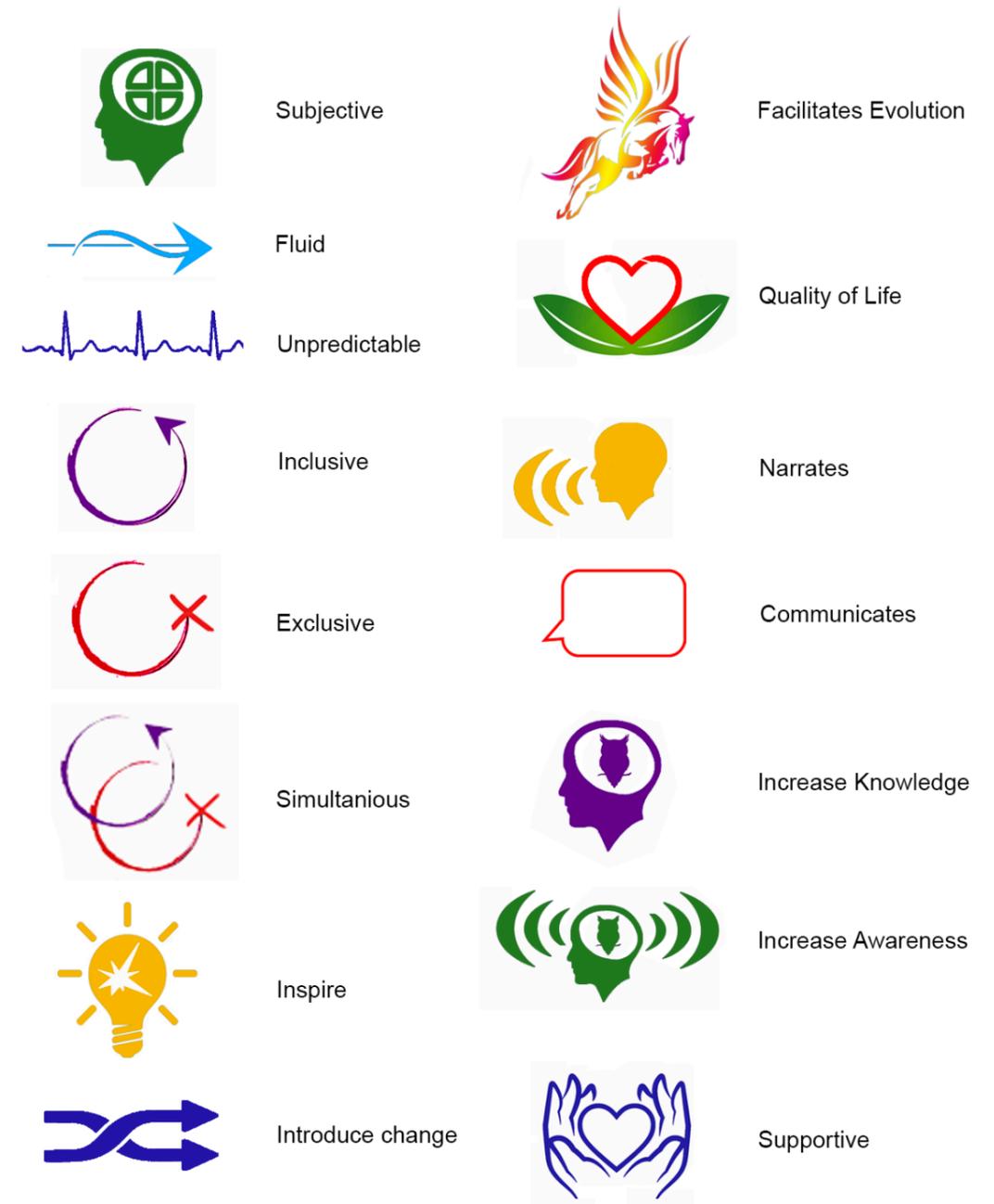


Fig. 5 | My Interpretation of Design
Authors own Artwork

What is Design? | Translation

Design is **subjective**, but at the same time mercurial by nature, **fluid** yet **unpredictable**.

Design can **include** or **exclude**, sometimes **simultaneously**.

Design **inspires, introduces change** and facilitates **evolution** to **increase quality of life**, be it aesthetically or functionally.

Design is **reflective**.

Design **narrates, communicates**, and **holds the power to increase knowledge** and **awareness**.

Therefore design is **supportive**.

My interpretation of design: 29.01.2022

Edition: 9

Due for review

Justice within Design

Design Justice is a radical approach to design that is led by marginalized communities and aims explicitly to challenge, rather than reproduce, structural inequalities. 'It's about design, social justice, and the dynamics of domination and resistance at personal, community and institutional levels.'¹²

The Design Justice Network Principles (DJNP) state that Design Justice rethinks design processes through centering people who are normally marginalized by design¹³ These principles are adopted by people and organisations around the world, and can be applied to all areas of design, including the processes and systems in place that shape our social world, our communities and the social activities within them.

Within the context of this field there are intersecting issues of design justice, such as social justice and mobility justice. DJNP's can offer a guide to allow for critique from a design justice perspective across these interactions, and other radical modes of design.

¹² Costanza-chock, Design Justice, 2020

¹³ 'Design Justice Network Principles' Design Justice Network <https://designjustice.org/read-the-principles>. Accessed January 19, 2022

Design Justice Network | Principle 5

'We see the role of the designer as a facilitator rather than an expert.'

Design Justice Network | Principle 2

'We center the voices of those who are directly impacted by the outcomes of the design process.'

Luba Lukova designs powerful and thought-provoking posters, all addressing essential themes of humanity and injustice worldwide, the messages encourage viewers to develop an empathetic understanding of social and cultural issues. (DJNP 1, 2 & 5) One of the most popular images from Lukova's 2008 Social Justice portfolio, Income Gap, (Fig 6) addresses the growing inequality in our world.



Fig. 6 | 'Income Gap' by Luba Lukova, 2004
<https://www.lukova.net/>

Social Justice

This example visually communicates an unbalance within society. Although it doesn't show sex explicitly, the name 'Income gap' to me infers that the large fork is male and the smaller one's are female, however maybe this says more about my perceptions than it does about the image.

Within my work, social and cultural unbalance manifests itself as exclusion and alienation, which is against the social justice principles of equity and participation. As with Lukova's work, powerful and thought-provoking images could spark empathic understanding, leading to social and cultural action for change, and is therefore radical in design thinking.

Design Justice Network | Principle 1

'We use design to sustain, heal, and empower our communities, as well as to seek liberation from exploitative and oppressive systems.'

Mobility Justice

This concept is concerned with our human right to move through life with freedom, yet in practise this freedom exists in relation to 'class, race, sexuality, gender, and ability exclusions from public space, from national citizenship, from access to resources, and from the means of mobility at all scales.'¹⁴ In the book 'Mobility Justice', Mimi Sheller states that 'we must consider how to combine the struggles for accessibility and bodily freedom of movement, for equitable infrastructures and spatial designs that support rights to movement'¹⁵. Although it is not stated, I would suggest that equitable infrastructures would also refer to community sport and social activity, however despite the vast amount of research around sports and social activity inclusion and accessibility, I could only find one paper that discusses mobility justice as a design mode within this field,¹⁶ and which has only just been published this month (January 2022). This leaves me questioning a lack of radical design thinking that has so far gone into community sports and social activities, and responding with the further question of whether we could look at interconnecting areas of justice as a vision that can guide us to create communities that are truly inclusive and transformative?

People with disabilities face over 200 barriers to doing physical activity¹⁷ including accessibility and inadequate facilities to name a few. Kathleen A. Martin Ginis argues that due to these issues, even widely publicised events such as the Paralympics haven't decreased barriers to physical activity for most people with disabilities¹⁸ Mobility Justice is a way of identifying areas that are lacking in the attribute of freedom of movement, and looking to design as a route to future resolution.

¹⁴ Mimi, Sheller. 'Mobility Justice: The Politics of Movement in an Age of Extremes' London: Verso, 2018.

¹⁵ Mimi Sheller. 'Mobility Justice' P. 99

¹⁶ L. Ravensbergen, R, Buliung. A, El-Geneydy. 'Cycling safety as mobility justice.' In The Cycling Companion, ed. G. Norcliffe, Routledge 2022.

¹⁷ Kathleen A. Martin Ginis, Jasmin K. Ma, Amy E. Latimer-Cheung & James H. Rimmer 'A systematic review of review articles addressing factors related to physical activity participation among children and adults with physical disabilities,' Health Psychology Review, 2016, 10:4, 478-494,

¹⁸ Kathleen A. Martin Ginis, & Cameron M. Gee, 'Paralympics Haven't Decreased Barriers to Physical Activity for Most People With Disabilities', August 24, 2021 <https://www.everythingzooomer.com/featured/sports/2021/08/24/paralympics-have-not-decreased-barriers-to-physical-activity-for-most-people-with-disabilities/>



Fig. 7 | Kgothatso Montjane in wheelchair designed for Tennis

<https://www.everythingzooomer.com/featured/sports/2021/08/24/paralympics-have-not-decreased-barriers-to-physical-activity-for-most-people-with-disabilities/>

Design for Inclusion

I see Inclusive Design as a close ally of Design Justice as they engage in similar practises and take similar standpoints. Inclusive Design grew from problematic access to the built environment¹⁹ however, through pioneering thinkers such as Ron Mace, an architect, designer, educator and wheelchair user who realised that accessibility and equal opportunities depended not just on better ramps or more accessible toilets but on all our interactions with the designed world,²⁰ it has now filtered through to all aspects of life such as products and services which includes sports and activities.

Two major social trends noticeable as drivers for Inclusive Design are an ageing population and the increasing rights and advanced products for disabled people.²¹ Of course the areas of inclusion are far wider and more complex than this, but due to the boundaries of this project I will focus on the major two identified.

19 Coleman, et al. 'Design for Inclusivity' P. 2

20 Jeremy Myerson, 'A Growing Movement', in *Design for inclusivity*, ed. Coleman, et al, Gower Publishing, London, 2007 P.24

21 Myerson. 'A Growing Movement'. P. 27

The Aging Population

The UK's population is ageing, primarily driven by improvements in life expectancy and declining fertility.

As our life expectancy lengthens, so does the age in which we are still active, however, longer life spans mean the almost certain experience of age-related capability loss. Reduction in eyesight, hearing, mobility, dexterity and cognition will come to us all, and disability will be a common experience.

Radical change in the design of products and services needs to take place to incorporate this social projection, and forecasting potential problematic situations could lead to a better quality of life for many in our more mature years.

Inclusive Activity Design

Equine therapy riding is a popular activity due to the human horse relationship and the many benefits that it can bring, for example, the motion of the horse is soothing and calming, whilst the bond it brings builds communication and confidence. Specialist equipment such as multi-coloured reigns to guide hand position, neck straps to hold onto and hoists for assisting people with low mobility (Fig. 8) have been designed to make horse riding more accessible. Without these products, riding would be a much harder task for some people, and in some cases impossible.

At riding therapy centres, the structure of riding lessons is also designed to be inclusive. The instructor uses speech as well as sign language, a range of sensory aids, and ability level is taken into account on an individual basis.

As with other sports and activities, the equipment seems to have been the focus in past attempts to make them more inclusive, however, the high cost of specialist equipment means very few organisations can offer disabled sports, and then when they do, the service is expensive and not accessible to people from poorer communities. What is the value of having inclusive activities if the equipment to make them inclusive costs so much that it excludes a large proportion of the people it was designed to include in the first place?



Fig. 8 | Disabled Riding Hoist
<https://horseplayriderhoist.com/>

Design for Exclusion

Inclusive design aims to remove the barriers that create undue effort and separation. It enables everyone to participate equally, confidently and independently in everyday activities²², but without conscious effort, it is very easy to exclude by design.²³

Building on the example of disabled horse riders and how we can design to include, here we can see how design can exclude, in this case by alienating disabled riders, treating them differently and giving them different rules to comply to than more able riders.

Disabled riders are the only group of riders that have to wear a high vis communication device (Fig. 9), despite evidence to suggest that over the high number of horse related incidents, none have ever been caused by a disabled rider. Alienating a minority group in this way can be seen as microaggressive, 'a comment or action that negatively targets a marginalized group of people'²⁴

This is an example of how some current systems are simply not working, and the needs of minority groups are not being met. Radical design thinking to activate transformative change needs to happen, for more sustainable and inclusive social practises to come into play.

22 Howard Fletcher, 'The principles of Inclusive design. (They include you.)' Commission for Architecture and the Built Environment, 2006.

23 Julia Cassim et al, Why Inclusive design?, in *Design for inclusivity*, ed. Coleman, et al, Gower Publishing, London, 2007 P 17

24 Anna Smith, 'What to know about microaggressions' Medical News Today, June 11 2020, <https://www.medicalnewstoday.com/articles/microaggressions>

'Tackling social exclusion - often through promoting social inclusion - is a global challenge for policy makers, practitioners and societies in general'²⁵

25 Hebe Schaillee et al. 'Community Sport and Social Inclusion' Sport in Society, Vol. 22. No. 6. P. 885-896, 2019



Fig. 9 | Disabled Rider Hi Vis Jacket
<https://www.rda.org.uk/impact/>

The Intersection | An example of how the two are not mutually exclusive

Designing for Inclusion can sometimes cause exclusion elsewhere. Julia Cassim et al, in 'Why Inclusive Design?' argue that design exclusion does not come about by chance, but by neglect, ignorance and lack of knowledge,²⁶ I would argue that is not always the case and other factors can come into play here. for example, Prosthetic limbs can be used as an example of how design can include and exclude simultaneously, with one being the unintentional effect of the other.

Products designed for patients of the NHS (Fig. 10) are there to inclusively support people with disabilities in being able to function, interact and join in with daily life and social activities, however many of these products exclude through stigmatising their users with ugly, inappropriate and often ineffective design²⁷ It has been reported that thousands of NHS patients are struggling with products which are inferior in design and function.²⁸

Faced with an ongoing funding crisis, the NHS puts this down to budget cuts, with a lack of skilled prosthetists coming through the system and modern methods using a laser taking over. Despite prosthetics going some way to include, we are finding that due to social issues, low cost and poorly designed products and methods they are simultaneously excluding. Is this neglect, ignorance or lack of knowledge? I would argue the root issues here are far more problematic and complex.

²⁶ Cassim et al, 'Why Inclusive design?', P.19.

²⁷ I.Gardner, L. Powell and M. Page, An Appraisal of a selection of products currently available to older consumers' Applied Ergonomics, p.35-39, 1993, DOI: 10.1016/0003-6870%2893%2990158-6

²⁸ Pat Hagan, 'My prosthetic leg would rub my skin so much it would be raw and bleeding': The thousands pained by ill-fitting artificial limbs as the NHS edges out its skilled craftsmen' Mail Online, March 6, 2017, <https://www.dailymail.co.uk/health/article-4287374/Thousands-pained-poor-artificial-limbs-NHS.html>

Fig. 10 | NHS Prosthetic leg
Smalley, Grace. "An investigation of the NHS service provision of prosthetic limbs." Loughborough University, 2013

Victoria Modesta exudes power, success and beauty. (Fig. 11) She uses forward thinking innovative design to challenge outdated social stigmas. In an interview with Dazed magazine, the pop star discussed bringing amputees and prosthetics into the mainstream and integrating marginal voices into the mainstream conversation without courting sympathy or victimisation.²⁹ This powerful progression could change the way many amputees feel about themselves and their disability, giving space for confidence, creativity and inclusion.

However, although opening up conversation and bringing awareness has positive consequences, we need to be mindful that not everyone can afford to be creative with their prosthetics, pushing the majority of wearers into wearing the less expensive, poorly designed versions. The effects of this, especially for younger people who look up to pop stars and aspire to their lead, could make people feel inferior, increase low self esteem, cause further criticism of oneself and in some cases lead to forms of body dysmorphic disorder (BDD).

²⁹ Jazz Monroe, 'Bionic pop star' Viktoria Modesta invades X Factor final , Dazed, December 15, 2014 <https://www.dazeddigital.com/music/article/22934/1/bionic-pop-star-viktoria-modesta-invades-x-factor-final>,

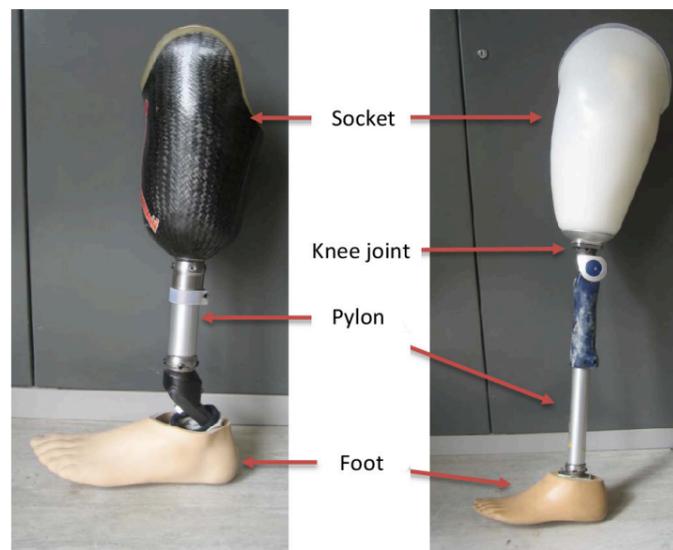


Fig. 11 | Victoria Modesta
<https://www.dazeddigital.com/music/article/22934/1/bionic-pop-star-viktoria-modesta-invades-x-factor-final>

It's wicked and problematic, that by trying to include and empower prosthetic wearers through radical design, Modesta could also be excluding a large number of the population, but let's look at the alternative, as a public figure she has a choice to hide her disability or own it and use it for social advancement. As 'every wicked problem can be considered to be a symptom of another problem'³⁰ it is not clear which problem it is best to work on, and to tackle this from a radical design perspective, we want to treat the cause not the symptoms³¹, leaving me with some fundamental questions such as 'Is design a privilege?' and 'How can we advance design without alienating and excluding people from lower income communities?'

³⁰ H. Rittel. M, Webber. 'Dilemmas in a general theory of planning.' Policy Sciences, 4, 1973, P. 155-169

³¹ Ben Sweeting, Wicked Problems in Design and Ethics, University of Brighton, December 2018.

Adopting Reflection as a Mode of Design

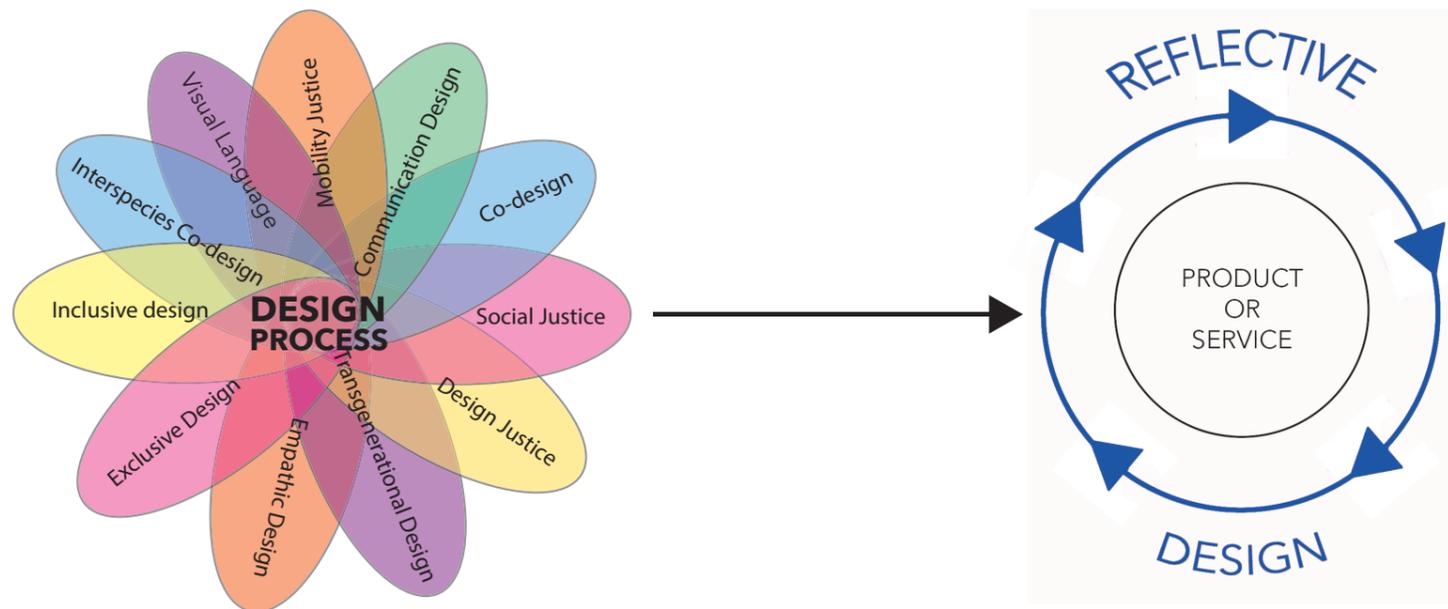


Fig. 12 | Framework for Reflective Design
Authors own Artwork

Before implementing products and services into society, we could better understand their impact by reflecting on the outcome and the consequences of the design to ensure we are tackling root issues in inclusive ways, for example we can ask ourselves 'is this design unintentionally going to exclude?' if it is, we then need to make some serious decisions and weigh up the value it brings to quality of life for some, against the negatives on others.

Reymen and Hammer explore possibilities of reflection for improving design processes in their paper 'Structured Reflection for Improving Design Process' In conclusion, they summarise the advantages as follows:

*'Reflection helps designers to learn from their experiences, to integrate and co-ordinate different aspects of a design situation, to judge the progress of the design process, to evaluate interactions with the design context, and to plan suitable future design activities.'*³²

This paper provides evidence of the value reflection can bring to multiple aspects of the design process and the benefit and support it offers for future design.

I propose reflection as a radical mode of design because if done correctly, it can really get down to whether or not it is working in solving the problems and challenges it was intended to solve, sometimes through the reflective process it can even unearth new issues, issues that are so buried under life's biases, cultures or everyday workings that without reflection we would never have realised them. Reflecting on previous work is a way of researching through design, approaching inquiry through the practice of design, and then suggesting an improved future state in the form of educated transformation. If we think of finished outcomes then influencing and having agency within the design process it could even be viewed as artefact codesign.

³² I.M.M.J. Reymen and D.K. Hammer, 'Structured Reflection for Improving Design Process' International Design Conference - Design 2002: Dubrovnik. May 14 - 17, 2002.

Empathic Design

Empathic design is a branch of user centred design approaches that supports building creative understanding of users and their everyday lives.³³

Without empathy, design faces a disconnect from its end user, often from the designer, and from the natural environment. It is not just one of these connections, but all three, which Sim Van Der Ryn in his book 'Design for an Empathic World' argues is 'necessary to design for a future that is more humane, equitable, and resilient.'³⁴

Van Der Ryn also suggests that design has been separated from its natural roots through the mechanization of the world, and that this detachment is 'part of the reason design is now faced with a pressing need to become more humane - to become empathic.'³⁵

The closer designers can get to experiencing the world through the eyes of people who are different from them in age and capability, the more likely they are to be able to empathise and design solutions to related issues, and so collaboration is needed.

I have identified two forms of collaboration which I think would be effective to achieve a more empathic design environment and so spark more radical design thinking:

Codesign: if we are mindful of each other, then creating alongside individuals can give valuable insight into their daily lives and any challenges they face, and this deeper empathic understanding of each other can manifest into a strong and successful codesign relationship.

User simulation: an effective way of experiencing the world and environments through other eyes, and getting an idea of what it is like to be someone else, I look at this in more detail through Figure 11, however I believe it is important to note that throughout a simulation exercise the person immersed, no matter how well they play the role, will always know subconsciously that their situation is temporary, therefore can we ever really experience and understand what it is like to be someone else? I would argue not, however, we can empathise.

³³ Carolien E. Postma et al, 'Challenges of Doing Empathic Design: Experiences from Industry, International Journal of Design, 6(1), 59-70. 2012.

³⁴ Sim Van Der Ryn, Design for an Empathic World, Washington: Island Press, 2013 P. 7

³⁵ Van Der Ryn. Design for an Empathic World. P. 9

Patricia Moore is a pioneering female designer, gerontologist (social scientist of the aging), author, educator and design thought leader.

In response to a microaggressive comment made by her colleagues, Patricia decided to conduct an empathy experiment to discover the realities of life as an eighty-year-old woman. Between 1979 and 1982, she visited 116 cities in America. She put on makeup so she looked old and wrinkly, wore glasses that blurred her vision, clipped on a brace and wrapped bandages around her torso so she was hunched over, plugged up her ears so she couldn't hear well, and put on awkward, uneven shoes so she was forced to walk with a stick. (Fig. 13)



Fig. 13 | Patricia Moore in disguise
<https://www.romankrznic.com/outrospection/2009/11/01/117>

Patricia created nine different personas in this way which she would rotate, including a homeless woman and a very wealthy woman in order to reflect on how other aspects influenced her experiences, and with the use of canes, walkers and a wheelchair, she was also able to approximate different levels of reduced mobility.

Unsurprisingly, the outcomes and behaviours shown towards the different disguises were extreme. Patricia was frequently abused, marginalised and subject to discrimination, even being violently attacked on one occasion, whilst on others she was shown kindness by helpful strangers.

I would propose simulation as a radical mode of research as it infiltrates the lives of others with the aim of getting further into their mindset, and getting to the root of their daily lives and discovering any challenges they may face, with the hope of making transformative changes for a more sustainable future.

Transgenerational Design

Patricia Moore's experiment inspired the redesign of multiple products for elderly consumers, turning existing situations into preferred ones through her personal experiences and challenges as an elderly person.

I predict transgenerational design will become a more widely adopted concept within design. As life expectancy increases, so will the need for products and services to accommodate this growing demographic, and we will need to shift some focus onto sports and community activities to support people as they stay active and social for longer.

It's the practice of making products and environments compatible with those physical and sensory impairments associated with human aging and which limit major activities of daily living³⁶.

³⁶ What is "transgenerational design?" Transgenerational, <https://transgenerational.org/viewpoint/transgenerational.htm>, Accessed January 30, 2022



Fig. 14 | Evolution of the good grip peeler
<https://medium.com/fluxx-studio-notes/how-to-use-empathy-in-design-without-killing-millions-of-women-5a9e84b2e424>

In 1990, a retired entrepreneur was cooking with his wife one day when he realised that due to her arthritis, she could no longer grip the potato peeler. Inspired by Patricia Moore's work, Sam Farber called upon the design team at Smart Design and pitched his idea to codesign a set of kitchen utensils that worked for people suffering impairments associated with human aging, but would also work more efficiently for everyone else too. Many designers came together for this project working late into the night and at weekends, which Davine Stowell's remembers as being an engaging and inspiring experience.³⁷

They also approached the American Arthritis Foundation, who's volunteers worked with them in the design process and gave feedback after trialling the products.

The Good Grip Swivel Peeler (Fig. 14) is still winning awards for design innovation today and is an inspiring example of how experts from design, industry and experts through experience can come together to tackle root causes of daily challenges to increase quality of life.

³⁷ Mark Wilson, The untold story of the vegetable peeler that changed the world, Fast Company, Interview with Davine Stowell's from Smart Design, August 24, 2018

Collaboration for Co-Design

Within my research of codesign, the terms codesign and collaboration are sometimes used interchangeably, with codesign sometimes being referred to as the participation of users within the design process, however I feel we can use these terms more effectively to refer to different levels of participation by establishing a clear difference between them. Collaboration can take place at any time during the design process, from as little as a debate or discussion, to a more in-depth and involved partnership, whereas I understand 'codesign' to mean the collaborator was involved from the design thinking and research stages, seeing it through to the outcome and even the reflective and trial and testing stages, meaning all parties were involved in the design of the end product or service.

The radical design modes I have explored within this project are human centred, that is they have come about with the aim to create a better quality of life for people. As we have seen previously, the closer we as designers can get to seeing the world and the things in it from their perspective, the more radical and transformative we can be in our thinking process. The shift then, from designing 'for' people to designing 'with' people, opens doors for cross discipline collaboration for the purpose of research and/or codesign. Diverse experts come together, including disciplinary fields, researchers and end users or consumers, (Fig. 16) who can also be seen as experts through their own experiences.³⁸ (DJNP 6) From a designer's standpoint, it is less costly and time consuming to design with the knowledge and experience of others, than to realise through testing that fundamental aspects have been overlooked.

38 F. Sleeswijk Visser et al. Contextmapping: Experiences from practice. in *CoDesign: International Journal of CoCreation in Design and the Arts*, Taylor and Francis, 2005. Vol. 1 No. 2. P.119-149

Ernest Callenbach, the Author of *Ecotopia*, left a wise and beautiful, and for me emotional, epistle on his computer shortly before his death, within which he recognised the strength in working together.

*'Children exude hope, even under the most terrible conditions, and that must inspire us as our conditions get worse. . . . Mutual support. The people who do best at basic survival skills are co-operative, good at teamwork, altruistic, mindful of the common good. . . . Thinking together is enormously creative; it has huge survival value.'*³⁹

39 'Ernest Callenbach, Last Words to an America in Decline' TomDispatch, May 12, 2012, <https://tomdispatch.com/ernest-callenbach-last-words-to-an-america-in-decline/>

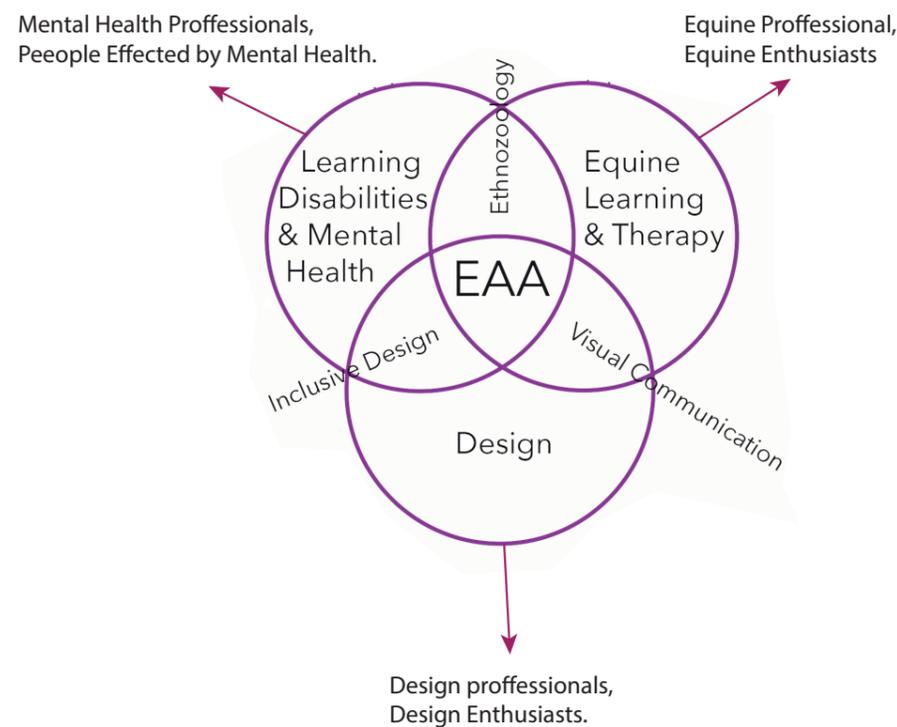


Fig. 15 | Proposed framework of codesign for my Studio project
Artwork by Author

Design Justice Network | Principle 6

'We believe that everyone is an expert based on their own lived experience, and that we all have unique and brilliant contributions to bring to a design process.'

Participant selection is an integral part of the process, as outcomes in either research or design will be significantly affected based on value and insight from collaborators. The process of selection is probable to change also, depending on the discipline, and so here I propose codesign not just as a mode of design, but as a sub-discipline of design, composed of its own experts with experience and knowledge of the process being an asset to any codesign project and support to the designer.

Interspecies Co-Design

If the main objective of Codesign is to ensure that all stakeholders are heard and included in the design or development process⁴⁰ then I would argue that if other living species are involved in the subject, as in the case of disabled horse riding for example, then the animal should be involved in the codesigning process and considered in the same way as any other participants.

Considering this standpoint, an interesting argument and line of enquiry would also be, 'can plants participate in codesign? They have characteristics, behaviours and attributes specific to them, therefore can they bring value and insight to the design process?

Bringing different species into the process will no doubt be problematic and new radical shifts in research methods and design thinking may be required to step out of the design comfort zone. Due to this, trial and error could be employed and seen as an opportunity to circularly tweak and adapt to achieve a harmonious codesign relationship, however, as with any participatory research human or non-human, ethics and standpoints need to be considered to identify the inherent dangers in trying to co-design with the voiceless, for example, how we can understand non humans enough to design from their perspective? It would be useful for a designer to make him or herself aware of a non-human's typical behaviours, as reflections of their underlying motivations which could provide a framework to begin hypothesizing the non-human partner's contribution to any process of co-design.⁴¹ Behaviour is a non-humans main source of communication, and so considering the ethology of a species would be a step towards a successful codesign relationship, however, ethics and barriers in non-verbal communication would need to be considered against any outcome.

I think this is a really interesting topic to consider and could provide new challenge and thinking to cross disciplinary design that has until relatively recently considered other species as artefacts as appose to participants. The Socio-environmental crises we find ourselves in, such as the loss of biodiversity and species extinction, could also be challenged by working with non-humans in participatory ways.⁴² and so interspecies codesign could make way for radical insights within sustainable design.

40 Our philosophy. posthumanism. more-than-human research. codesign. critical anthropomorphism..., <https://www.growingcodesign.com/research>, Accessed 25th January 2022

41 Steve North, "Hey, where's my hay?" design fictions in horse-computer interaction.' Conference: The Fourth International Conference on Animal-Computer Interaction, Milton Keynes, United Kingdom, November 21-23, 2017

42 Participatory Research in More-than-Human Worlds, ed. Michelle Bastian et al. United Kingdom: Routledge. 2017

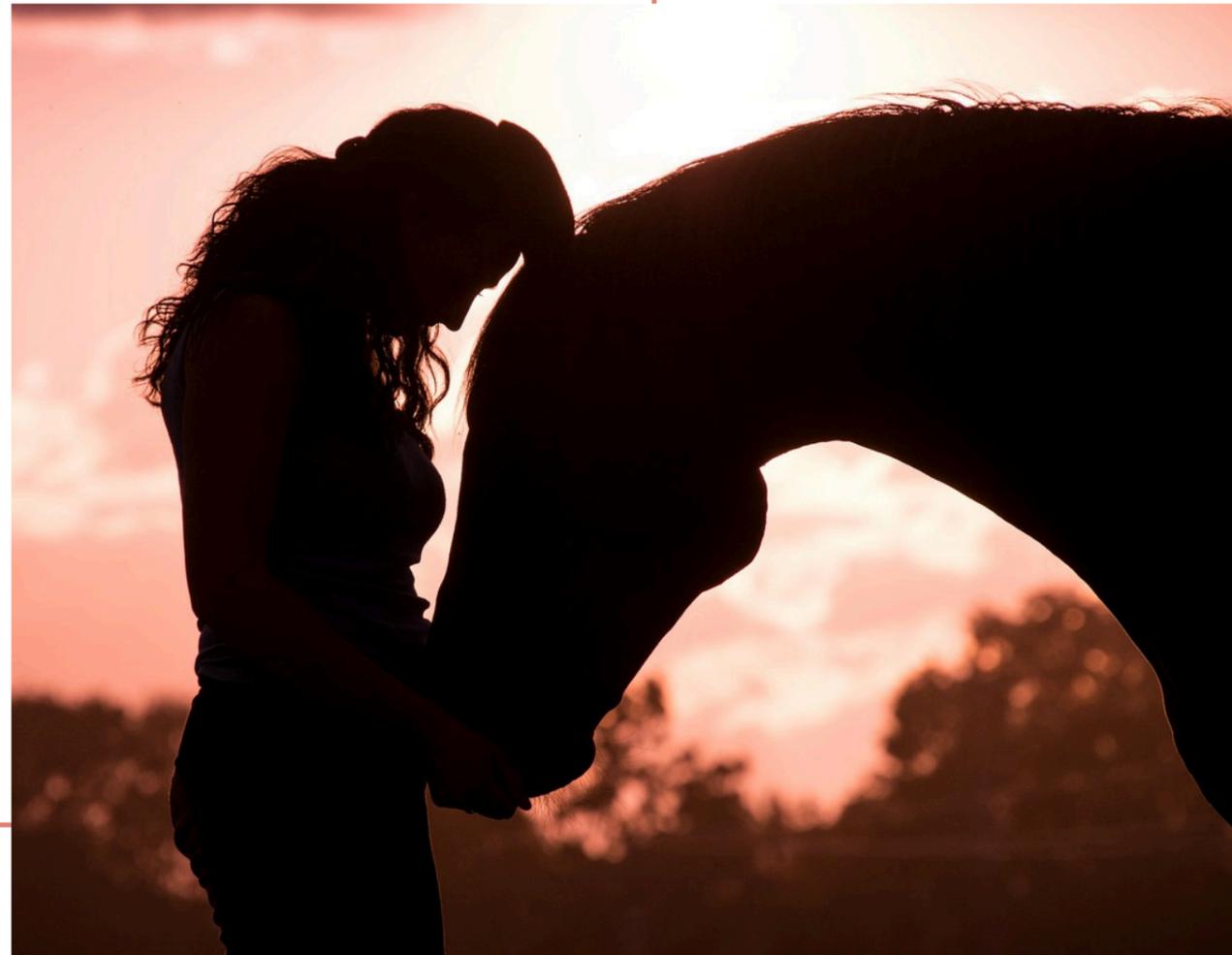
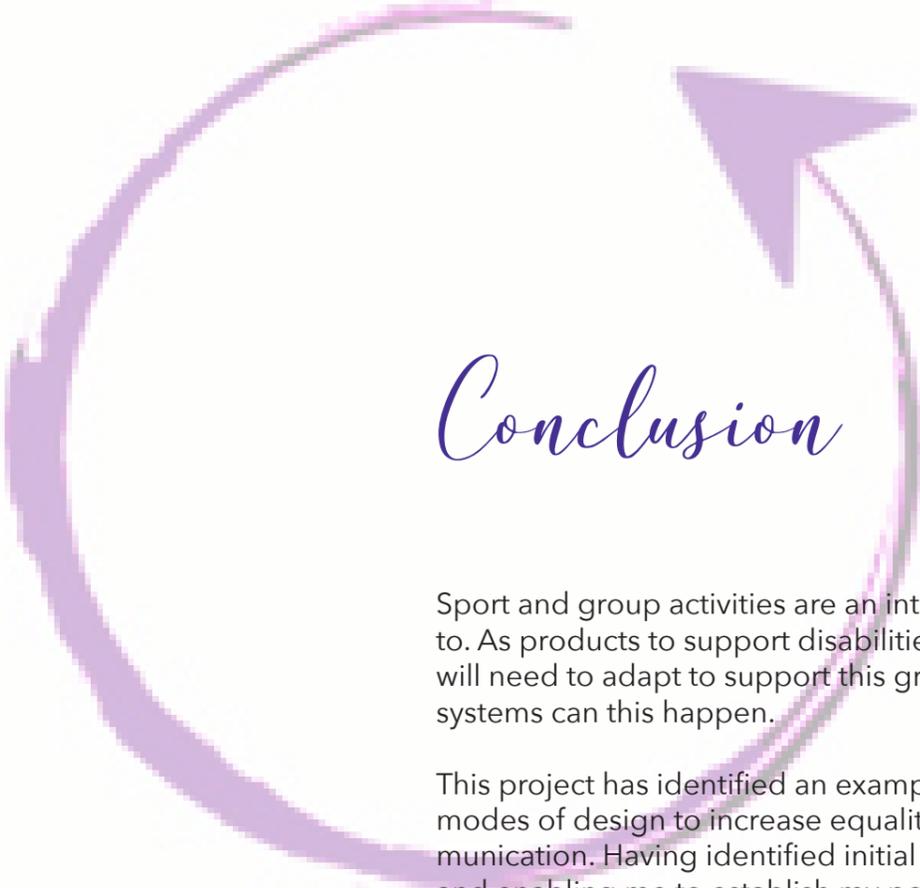


Fig 16 | Interspecies relationships
<https://pixabay.com/photos/horse-woman-animal-human-love-3601046/>



Conclusion

Sport and group activities are an integral part of a community, however able or whatever age, we should all be able to access and join in with them if we wish to. As products to support disabilities are becoming further advanced, the elderly more active and we are living longer, it is inevitable that sports and activities will need to adapt to support this growing demographic with increased means of mobility, and only through radical rethinking of current problematic design systems can this happen.

This project has identified an example of an exclusive practice within horse riding and offered a theoretical solution suggesting how we could adopt radical modes of design to increase equality and inclusivity within the space. The solution gives the audience agency through clear direction for action via visual communication. Having identified initial design modes, my research has taken me down new avenues of ways to approach design, sparking new areas of interest and enabling me to establish my position within design.

As I delved deeper to discover more radical ways of thinking and underlying issues that challenge equality and inclusivity within social activities, it raised some further questions and further discussion needs to take place if we are to really explore the roots of social activity for a sustainable and inclusive future in an aging and more complex and diverse world than ever before.

Attention needs to be applied not only on designing people in, but also on reflection of design to reduce outcomes that result in designing people out. Simulation and participatory research methods can enable us to infiltrate deeper into people's lives and perspectives and realise needs that are not being met by current solutions. Radical methods can then challenge what is socially accepted, and new ways of approaching design can bring positive transformative change.

This workbook highlighted to me the importance codesign plays within the multidisciplinary world of design (whether it be with people, other species or artefacts) and the value user perspectives can bring to sometimes complex problematic challenges within society and its design. Future projects will further investigate collaborative practices and how they facilitate the codesign process, supporting the multidisciplinary nature of design.

Journal

- Barry. Ann Marie, Perception Theory: A Neurological Perspective on Visual Communication, in Handbook of Visual Communication, second edition, ed. Sheree Josephson et al. London: Routledge, 2020 P.3
- Cassim, Julia. et al, Why Inclusive design?, in *Design for inclusivity*, ed. Coleman, et al, Gower Publishing, London, 2007
- Gardner, I. Powell, L. and Page, M. An Appraisal of a selection of products currently available to older consumers' *Applied Ergonomics*, p.35-39, 1993,
- Klarén. Ulf, and Anter, Karin. Seeing colour, in *Colour and design*, ed. Marilyn DeLong, Barbara Martinson, London: Bloomsbury Publishing P. 3-17
- Leonard. Dorothy, and F. Rayport. Jefferey, 'Spark Innovation through Empathic Design' *Harvard Business Review*, November 1997 DOI: 10.1142/9789814295505_0016
- Martin Ginis, Kathleen A. Ma, Jasmin K. Latimer-Cheung, Amy E. & Rimmer, James H. (2016) A systematic review of review articles addressing factors related to physical activity participation among children and adults with physical disabilities, *Health Psychology Review*, 10:4, 478-494,
- Myerson, Jeremy. 'A Growing Movement', in *Design for inclusivity*, ed. Coleman, et al, Gower Publishing, London, 2007
- North, Steve. "Hey, where's my hay?" design fictions in horse-computer interaction.' Conference: The Fourth International Conference on Animal-Computer Interaction, Milton Keynes, United Kingdom, November 21-23, 2017
- Postma, Carolien. Zwartkruis-Pelgrim, Elly. Daemen, Elke. Du, Jia, 'Challenges of Doing Empathic Design: Experiences from Industry, *International Journal of Design*, 6(1), 59-70. 2012.
- Rittel. H. and Webber. M, 'Dilemmas in a general theory of planning.' *Policy Sciences*, 4, 1973, P. 155-169
- Reidy, Chris. 'Storytelling Practice in Transformative Systems' In book: *Storytelling for Sustainability in Higher Education: An Educator's Handbook* p.71-87 Routledge, 2020
- Schaillee, Hebe. et al. 'Community Sport and Social Inclusion' *Sport in Society*, Vol. 22. No, 6. P. 885-896, 2019
- Sleeswijk Visseri, Froukje. Jan Stappers. Pieter. Van Der Lugt, Remko. Contextmapping: Experiences from practice. in *CoDesign: International Journal of CoCreation in Design and the Arts*, Taylor and Francis, 2005, Vol. 1 No. 2, P.119-149
- Ben Sweeting, *Wicked Problems in Design and Ethics*, University of Brighton, December 2018.

Books

- Coleman, Roger, et al. 'Design for Inclusivity' Aldershot: Gower Publishing Ltd. 2007
- Costanza-chock, Sasha, *Design Justice*, Massachusetts: The MIT Press, 2020
- Handbook of Visual Communication*, Edited by Sheree Josephson, James D. Kelly, and Ken Smith
- Participatory Research in More-than-Human Worlds*, ed. Michelle Bastian et al, United Kingdom: Routledge, 2017
- Van Der Ryn, Sim. *Design for an Empathic World*, Washington: Island Press, 2013
- Wing Sue, Derald. and Spanierman, Lisa. *Microaggressions in Everyday Life*, United Kingdom: Wiley, 2020.

Publication

Fletcher, Howard. 'The principles of Inclusive design. (They include you.)' Commission for Architecture and the Built Environment, 2006.

Tutorial and Discussions

Sally Sutherland et al. Group Tutorial, Online, January 27 2022.

Websites

Blanton, Nicole 'What is the future of wearable technology in healthcare?', Baylor collage of Medicine, November 10, 2021, <https://blogs.bcm.edu/2021/11/10/what-is-the-future-of-wearable-technology-in-healthcare/>

Blanton, Nicole. 'What is the future of wearable technology in healthcare?', Baylor collage of Medicine, November 10, 2021, <https://blogs.bcm.edu/2021/11/10/what-is-the-future-of-wearable-technology-in-healthcare/>

'Design Justice Network Principles' Design Justice Network <https://designjustice.org/read-the-principles>, Accessed January 19, 2022

'Ernest Callenbach, Last Words to an America in Decline' TomDispatch, May 12, 2012, <https://tomdispatch.com/ernest-callenbach-last-words-to-an-america-in-decline/>

Hackenberg, Jonquil 'It's Time To Make Sport More Inclusive And Diverse' Forbes, September 14, 2021 <https://www.forbes.com/sites/jonquilhackenberg/2021/09/14/its-time-to-make-sport-more-inclusive-and-diverse/?sh=2ab497183dea>

Hagan, Pat 'My prosthetic leg would rub my skin so much it would be raw and bleeding': The thousands pained by ill-fitting artificial limbs as the NHS edges out its skilled craftsmen' Mail Online, March 6, 2017, <https://www.dailymail.co.uk/health/article-4287374/Thousands-pained-poor-artificial-limbs-NHS.html>

Monroe, Jazz 'Bionic pop star' Viktoria Modesta invades X Factor final , Dazed, December 15, 2014 <https://www.dazeddigital.com/music/article/22934/1/bionic-pop-star-viktoria-modesta-invades-x-factor-final>,

Our philosophy. posthumanism. more-than-human research. codesign. critical anthropomorphism..., <https://www.growingcodesign.com/research>, Accessed 25th January 2022

Smith, Anna. 'What to know about microaggressions' Medical News Today, June 11 2020, <https://www.medicalnewstoday.com/articles/microaggressions>

'Technology, Innovation and Grit: Faster, Higher, Stronger in Disabled Sports' WIPO Magazine, August 2008, https://www.wipo.int/wipo_magazine/en/2008/04/article_0002.html

Wechsler, Jax. 'Design Pioneer: Patricia Moore - Mother of Universal Design' WonderWomen, <http://wonderwomenglobal.com/design-pioneer-patricia-moore-mother-of-universal-design/>, Accessed 9th January 2022

What is "transgenerational design?" Transgenerational, <https://transgenerational.org/viewpoint/transgenerational.htm>, Accessed January 30, 2022

Wilson, Mark. The untold story of the vegetable peeler that changed the world, Fast Company, Interview with Davine Stowell's from Smart Design, August 24, 2018

Images



Fig 1 | An example of how we can adopt radical design modes to begin tackling exclusion within sports & social activities
Authors own Artwork



Fig 2 | A nascent Tree of Social Design
Authors own Artwork



Fig. 3 | Inclusive Poster Design
Amy Lehman. Etsy. <https://www.etsy.com/uk/listing/1085575010>, Accessed January 21, 2022



Fig. 4 | Red Wing Visual Essay
Red Wing, Sadie. Lakhota. <https://www.sadieredwing.com/copy-of-new-page-1>. Accessed January 14, 2022



Fig. 5 | My Interpretation of Design
Authors own Artwork



Fig. 6 | 'Income Gap' by Luba Lukova, 2004
Luba Lukova. Luba Lukova: Designing JusticeTraveling Exhibition. <https://www.lukova.net/> Accessed January 17, 2022



Fig. 7 | Kgothatso Montjane in wheelchair designed for Tennis
Martin Ginis, Kathleen A. & Gee, Cameron M. 'Paralympics Haven't Decreased Barriers to Physical Activity for Most People With Disabilities', August 24, 2021 <https://www.everythingzoomer.com/featured/sports/2021/08/24/paralympics-have-not-decreased-barriers-to-physical-activity-for-most-people-with-disabilities/>



Fig. 8 | Disabled Riding Hoist
Horseplay. <https://horseplayriderhoist.com/> Accessed January 12, 2022



Fig. 9 | Disabled Rider Hi Vis Jacket
Ridding for the Disabled Association. <https://www.rda.org.uk/impact/>. Accessed January 8, 2022



Fig. 10 | NHS Prosthetic leg
Smalley, Grace. "An investigation of the NHS service provision of prosthetic limbs." Loughborough University, 2013



Fig. 11 | Victoria Modesta
Monroe, Jazz. 'Bionic pop star' Viktoria Modesta invades X Factor final , Dazed, December 15, 2014 <https://www.dazeddigital.com/music/article/22934/1/bionic-pop-star-viktoria-modesta-invades-x-factor-final>,



Fig. 12 | Proposed framework of Reflective Design
Artwork by Author



Fig. 13 | Patricia Moore in disguise
Krznaric, Roman. 'How an industrial designer discovered the elderly' Roman Krznaric. <https://www.romankrznaric.com/outrospection/2009/11/01/117>, Accessed January 14, 2022.



Fig. 14 | Evolution of the good grip peeler
Tebb, Rupert. 'How to use empathy in design without killing millions of women' Medium. June 28, 2016. <https://medium.com/fluxx-studio-notes/how-to-use-empathy-in-design-without-killing-millions-of-women-5a9e84b2e424>



Fig. 15 | Proposed framework of codesign for my Studio project
Artwork by Author



Fig 16 | Interspecies relationships
Rebecca's Pictures. Pixabay. <https://pixabay.com/photos/horse-woman-animal-human-love-3601046/> Accessed January 24, 2022