Faculty of Design

2021

The Other Side of Design: Tension manifolds and collective action

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The Other Side of Design: Tension Manifolds and Collective Action

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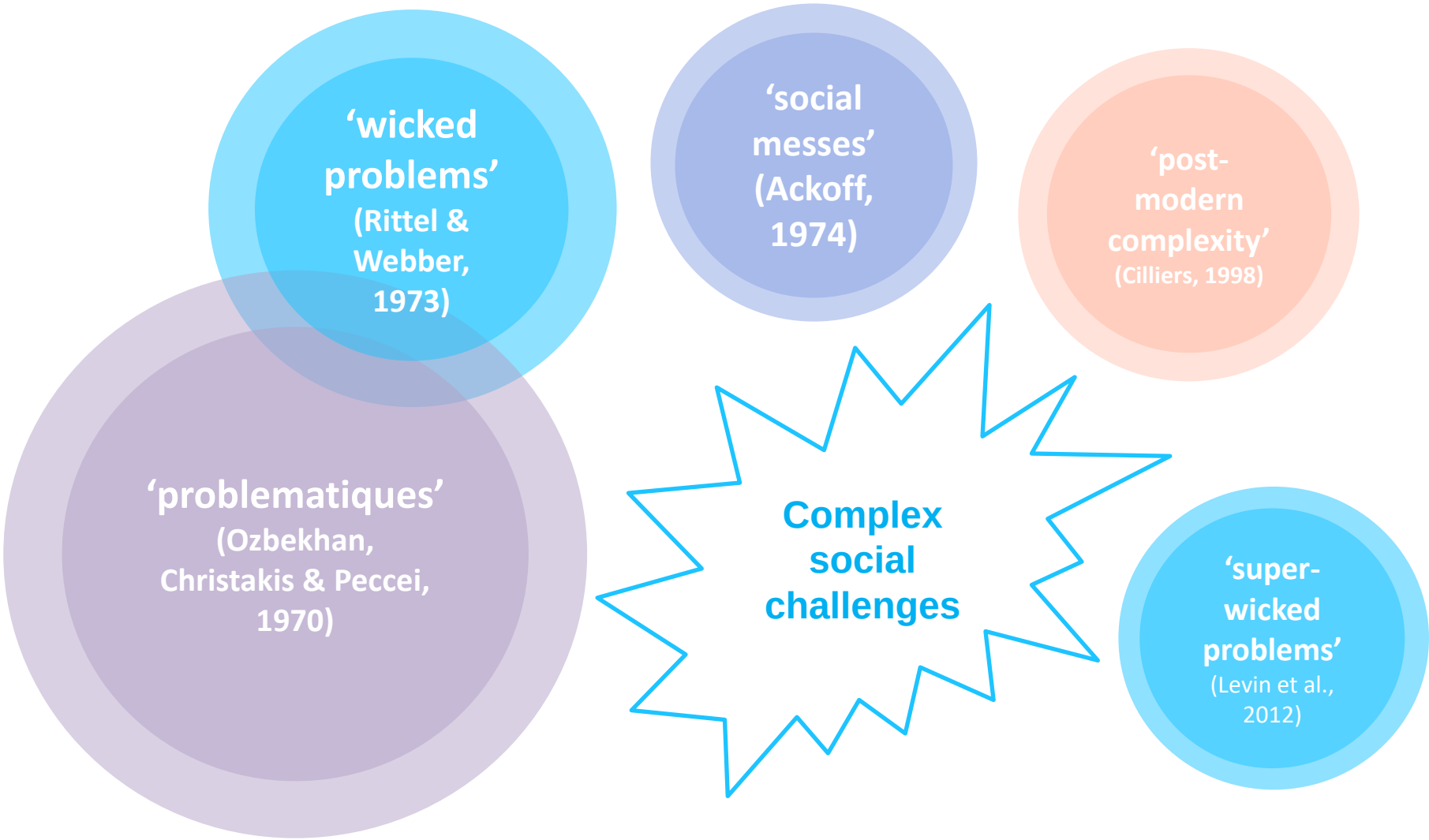
RSD10 Symposium | Nov 2021

Overview

1. Engaging complex issues
2. Dynamic tensions as emergent ‘fields’
3. ‘Tension manifolds’ as a design medium

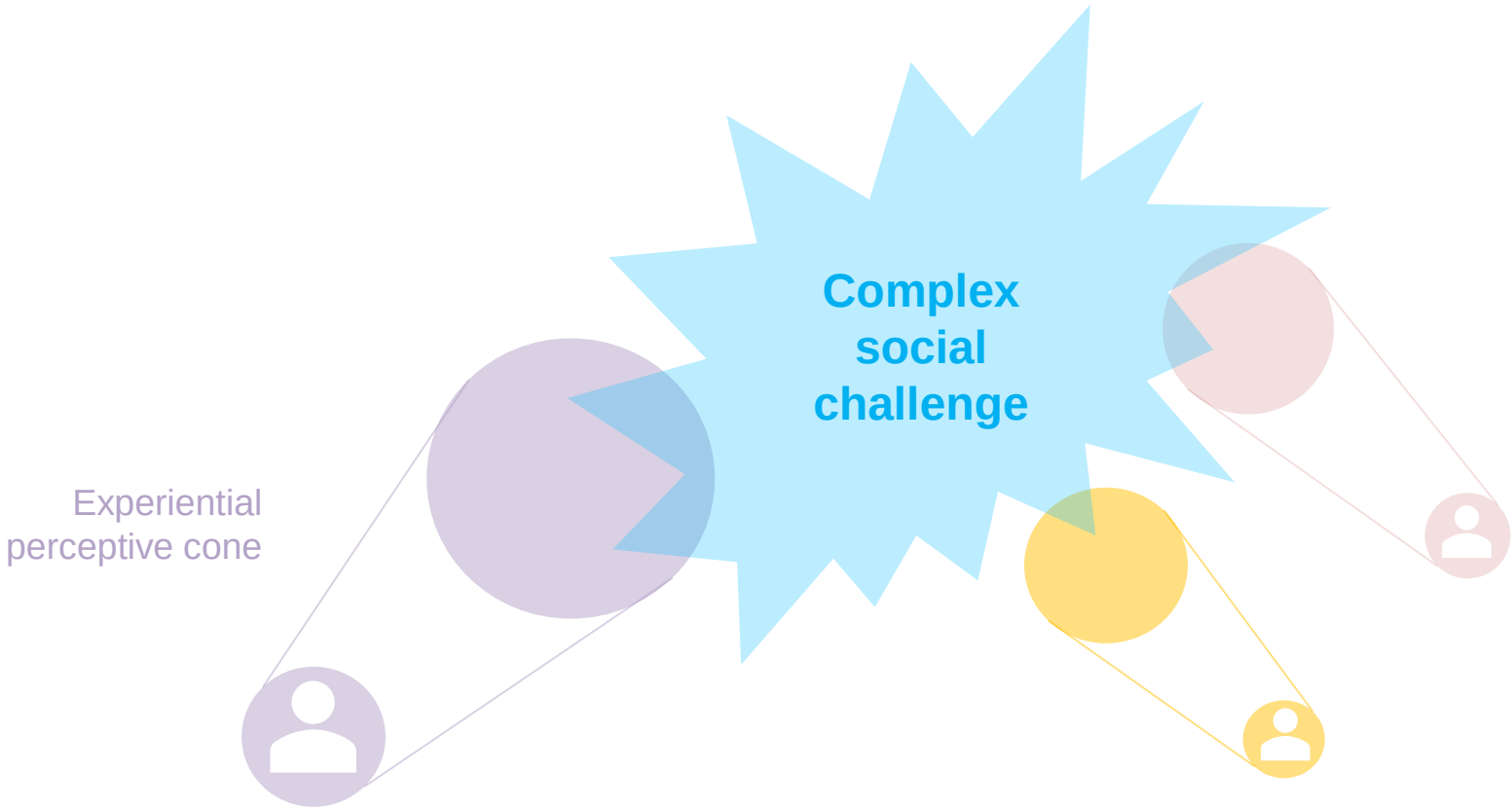
Engaging complex issues

Complex social challenges have multiple conceptualizations


‘wicked problems’ (Rittel & Webber, 1973)
‘social messes’ (Ackoff, 1974)
‘post-modern complexity’ (Cilliers, 1998)
‘problematiques’ (Ozbekhan, Christakis & Peccei, 1970)
Complex social challenges
‘super-wicked problems’ (Levin et al., 2012)

Participants perceive different ‘parts’ of a complex social challenge

Collective action participants perceive different ‘parts’ of a complex challenge

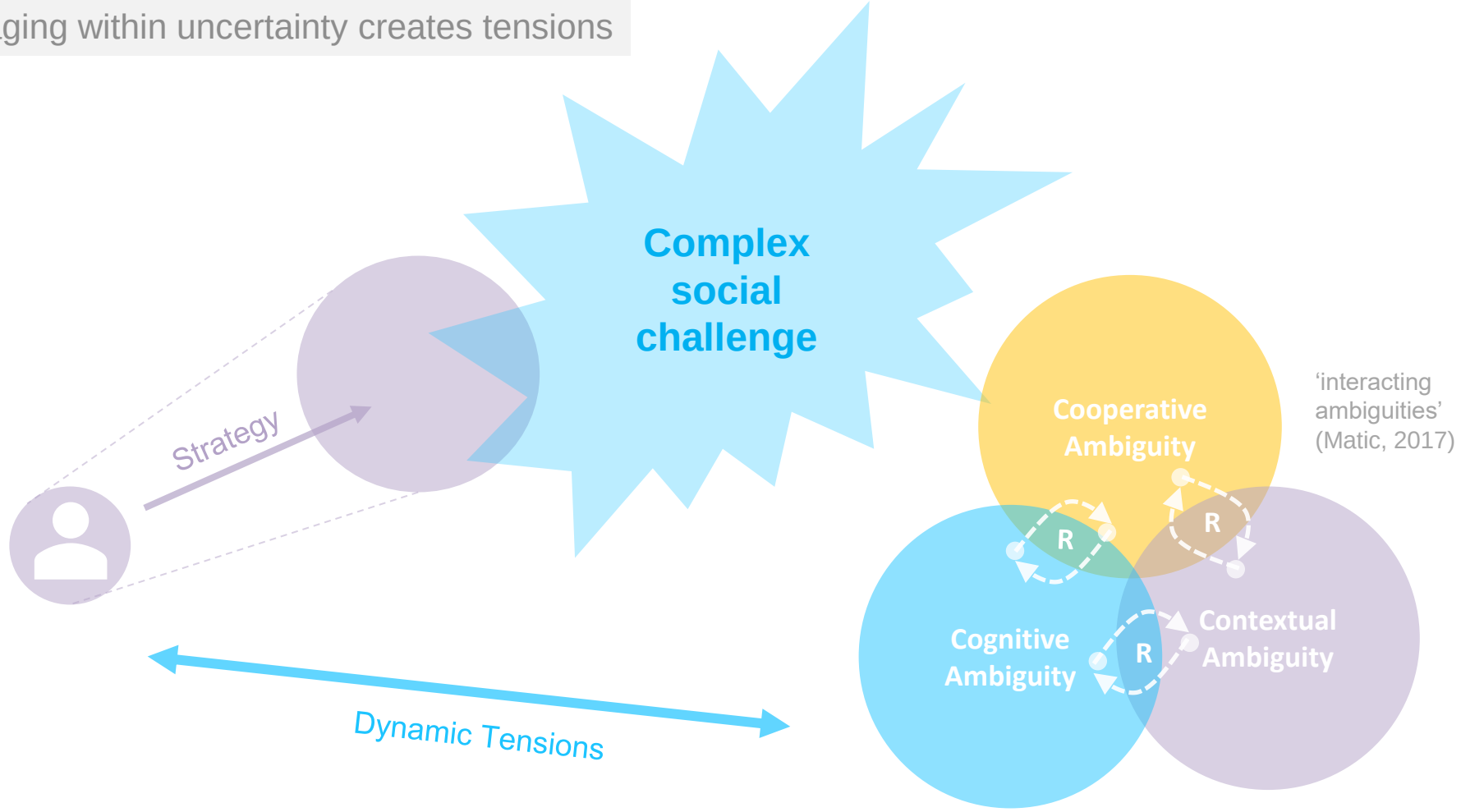


Ways of ‘looking’ inform understanding

Perceiving only a portion of a complex issue frames the boundaries of understanding and limits it – due to the specific properties that each way of ‘looking’ embodies.

Inability to perceive the entirety of a complex challenge creates dynamic tensions

Engaging within uncertainty creates tensions

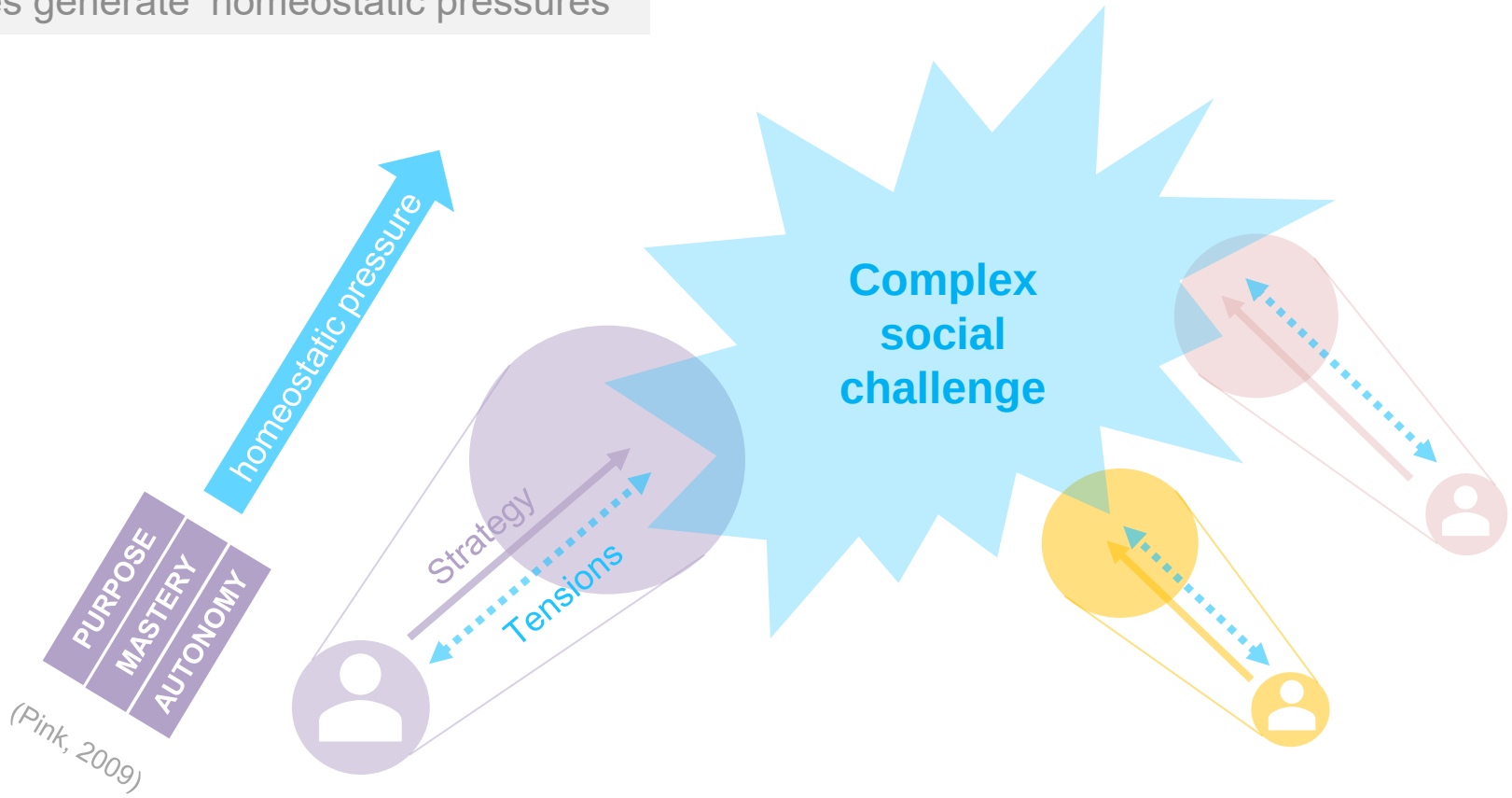


'interacting ambiguities' (Matic, 2017)

Attempts to formulate strategy create stresses

Stresses affect perceptions of relationships and influence stakeholder understanding of their own situation – which limits the possibilities of collective action.

Stresses generate ‘homeostatic pressures’



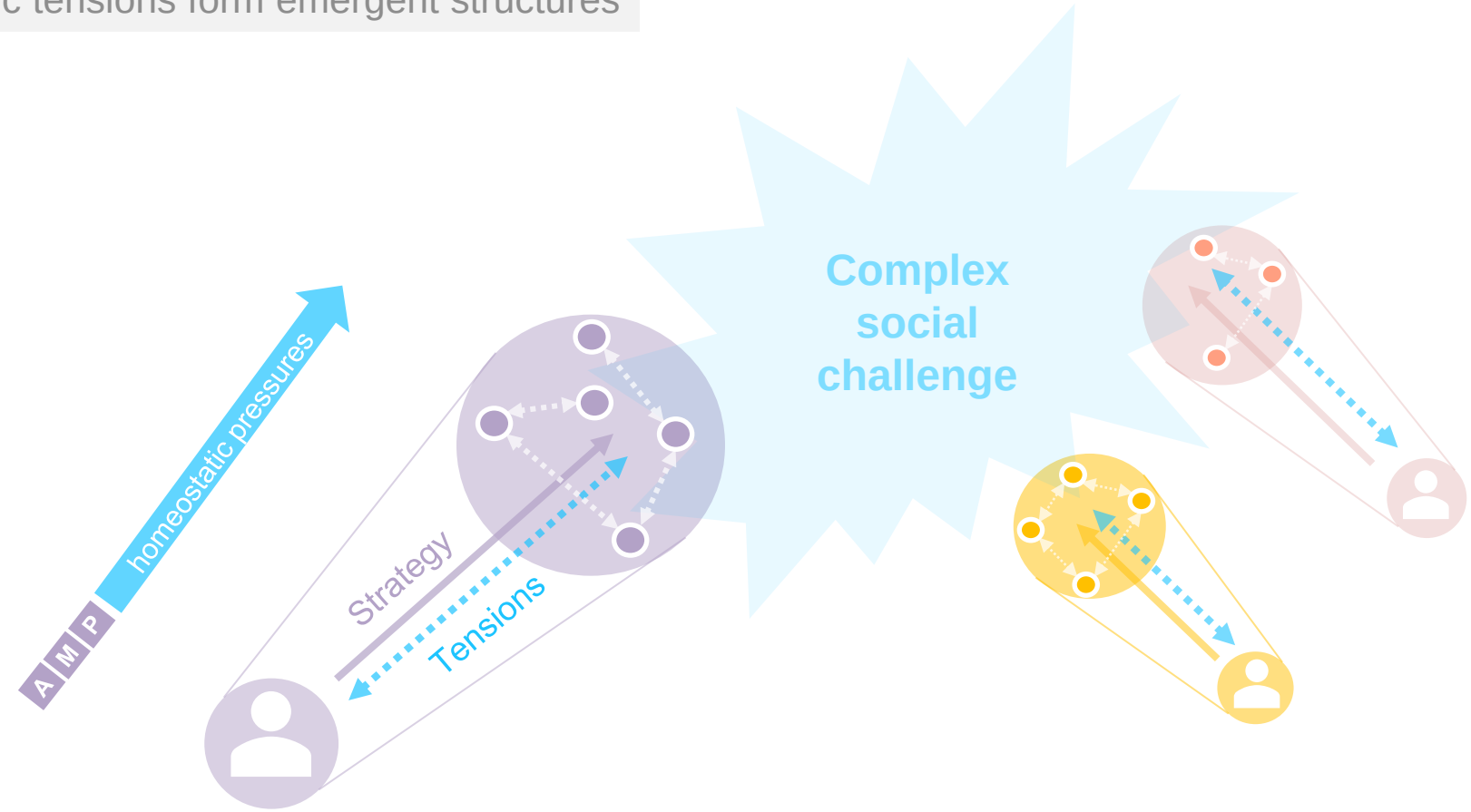
..which emerges sets of tension relationships

Tension relationships are dynamic and emergent, yet also semi-stable

Tension relationships as tensegrity

Dynamic tensions are understood to influence perception (Cabe, 2019) via tensegrity – where organisms are ‘pre-loaded’ with stress, while contending with ‘compression’ forces

Dynamic tensions form emergent structures



..that inform stakeholder perceptions & affect relationships

How might we understand such assemblages of dynamic tensions – to enable collective action?

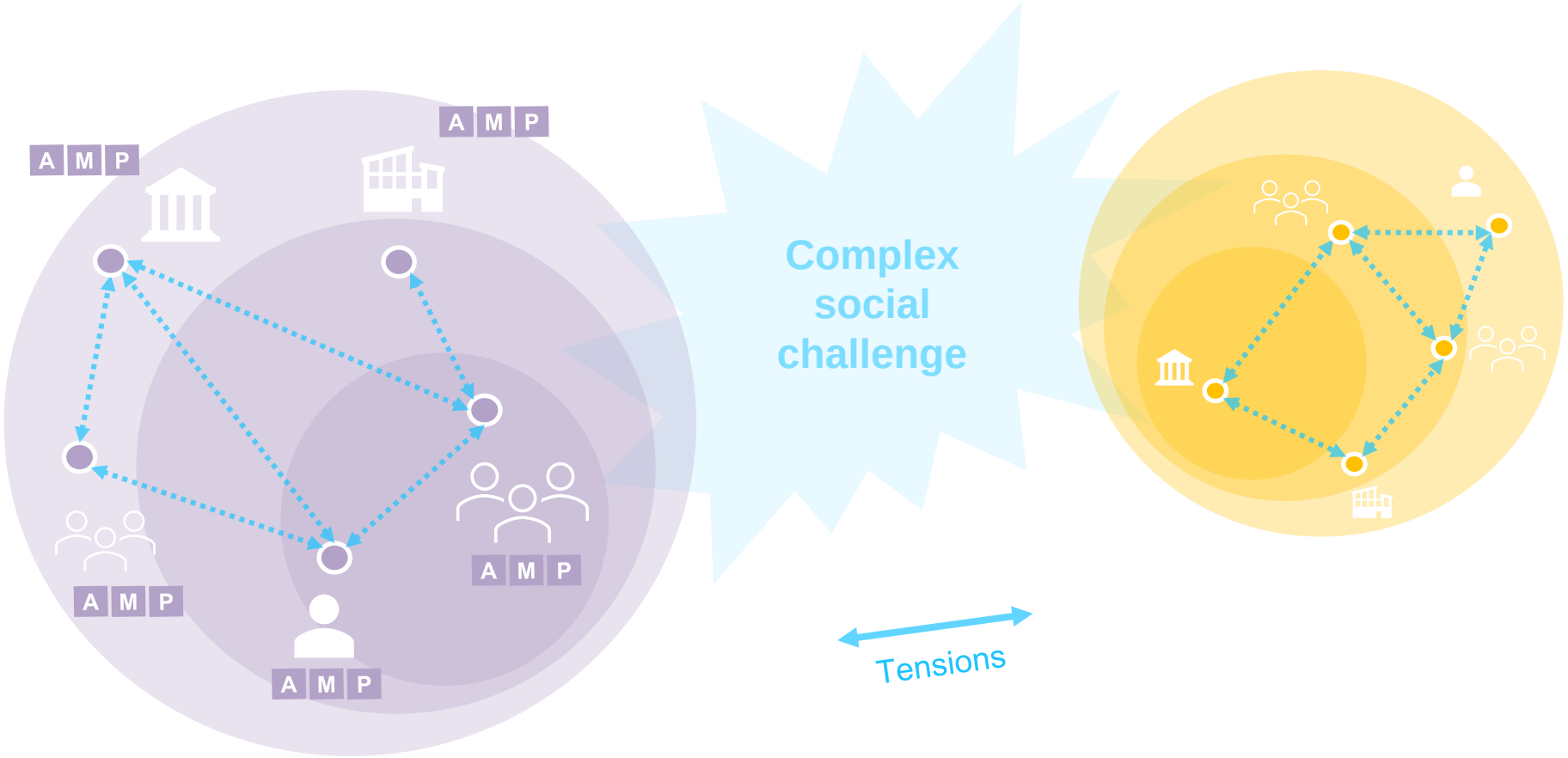
Dynamic tensions as emergent ‘fields’

Social experiences as 'fields'

Stakeholders experiences can be understood through the lens of field theory – and analyzed with topological concepts (Lewin, 1942; Martin, 2003)

Diverse stakeholders engaged in collective action can be seen as part of a ‘social field’ situation

Dynamic tensions create semi-stable structures between diverse actors



..that can be seen as “fields” influencing perception & action

How might we understand such emergent fields – to enable design for collective action?

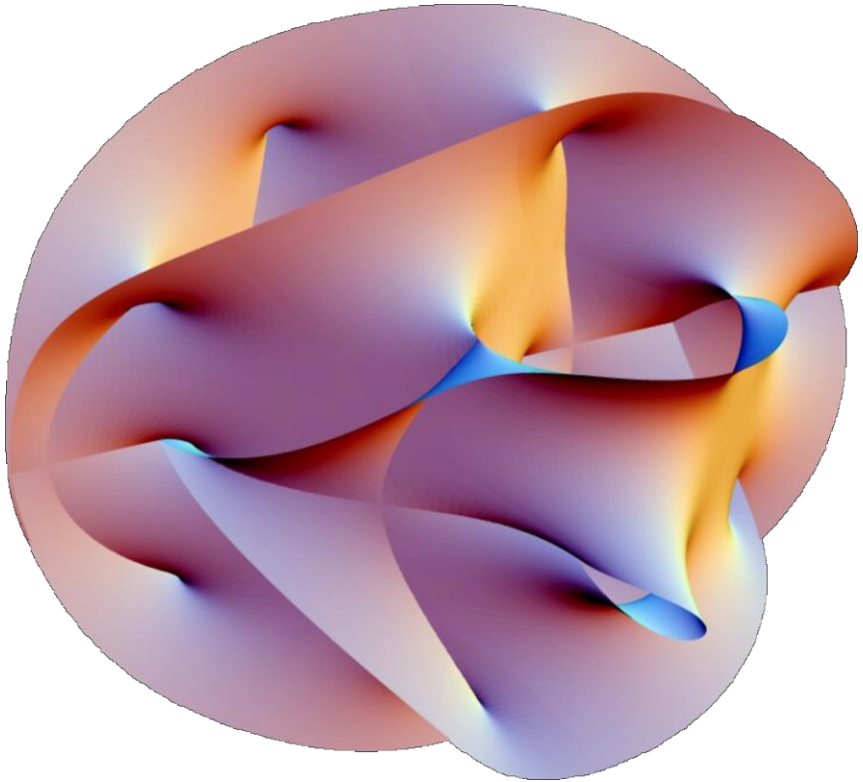
‘Tension manifolds’ as a design medium

‘Tension manifolds’ represent emergent tensions that stakeholders experience within an evolving systemic issue

‘Manifolds’ as intersections of interacting fields

Complex manifolds (Carter, 1995) can be seen to support phenomena such as contradiction, paradox and social reflexivity (Zienkowski, 2017) through self-intersection and curvature

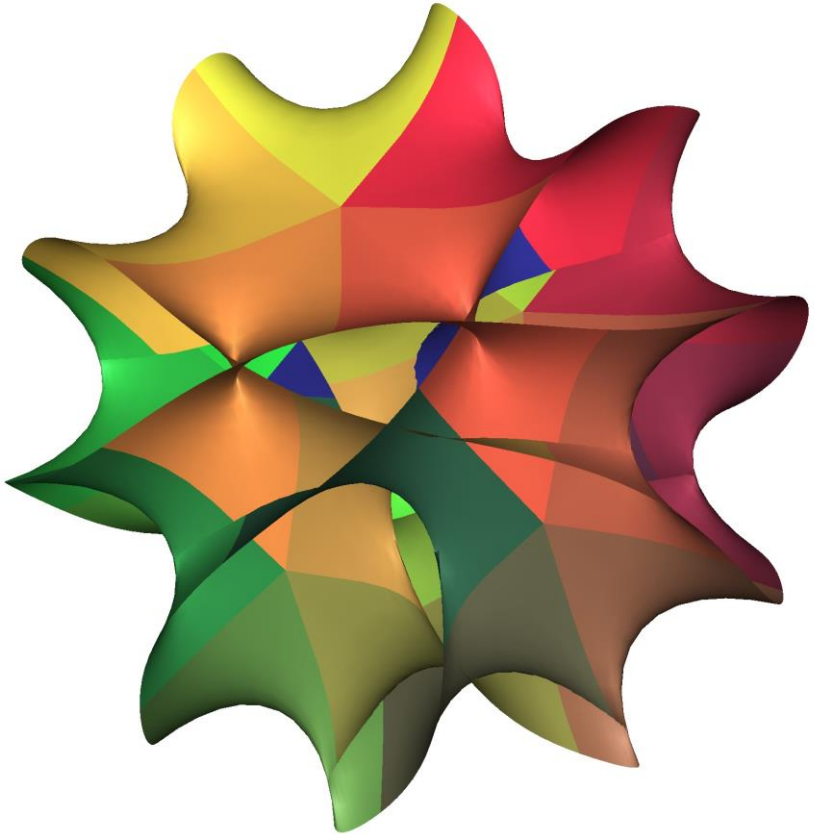
‘Tension manifolds’ describe evolving sets of tensions that stakeholders experience



Calabi-Yau manifold – Ian Consterdine – Flickr

..by using spatial / topological representation

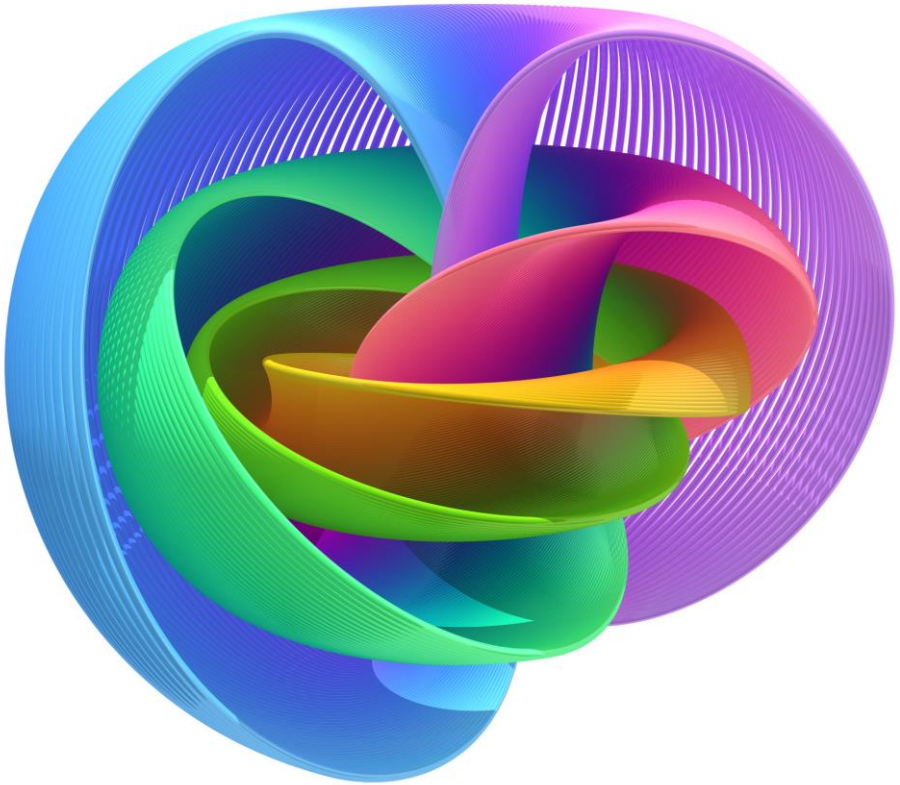
Areas of curvature can represent divergent stakeholder tensions



Calabi-Yau Manifold – Andrew J. Hanson – Wikipedia

..while ‘flat’ surfaces can represent areas of alignment

Areas of self-intersection can represent reflexivity



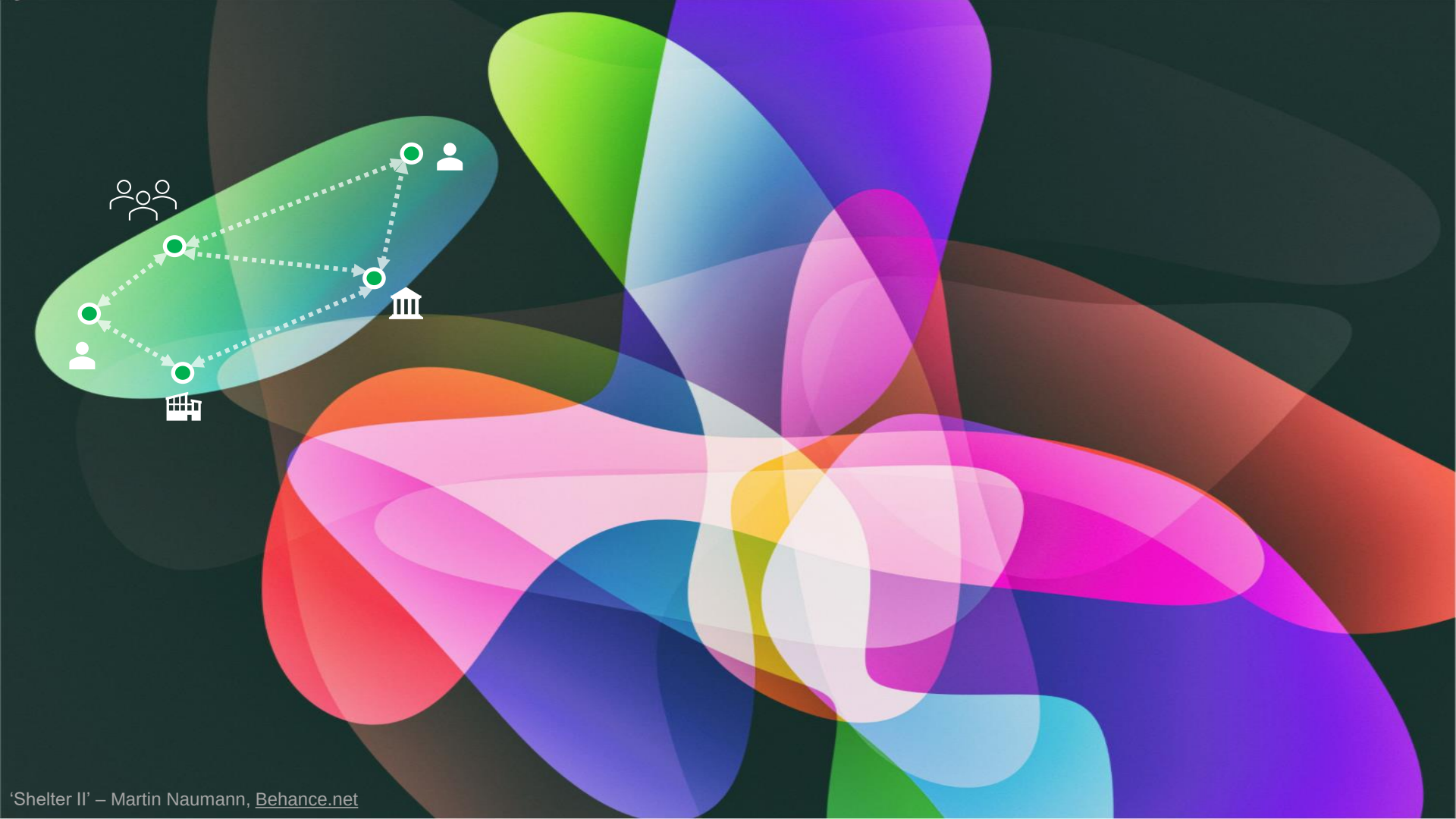
Hyersphere – Niles Johnson – Wikipedia

..to support recursiveness and paradoxes

In this sense, ‘tension manifolds’ may be utilized to perceive tensions as a psycho-social 'fascia’ that enables design

Tension manifolds as design surfaces

The ‘tensegrity’ aspect of the socio-affective (Massumi, 2002) dynamic forces experienced by the stakeholders (Marsico & Tateo, 2017) can be used as a design affordance



‘Shelter II’ – Martin Naumann, Behance.net

This allows us to identify three specific strategies for enabling design

Strategies for enabling design

STRATEGY 1

Alter the ways of looking: identify places where the position, direction, or characteristics of ‘looking’ may be altered for the participating stakeholders – to allow for a different emergent character of their ‘perceptive cones’.

STRATEGY 2

Identify tension structures: as areas of extreme ‘curvature’ within the tension manifolds – with the greatest contrast between the assumed ‘universality’ of the design medium and the actual ‘specificity’ experienced by the stakeholders involved.

STRATEGY 3

Define inflection points: as opportunities within the associated tensegrity structures and places where the ‘pre-loaded’ tensions and the 'compression’ relationships may be altered to allow greater degrees of freedom for the participants involved.

Opportunities for further research

‘Tension manifolds’ are conceptualized as a design medium where the reflexive exploration can be harnessed to identify design affordances capable of enabling multi-stakeholder collaboration and collective action.

Thank you!

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