

*Towards Regenerative Cultures and Metanarratives in Girona:
A Transition Narrative-Design Case Study*

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Abstract

At the age of a failing economic system and undeniable evidence of the effects humankind has had over the planet, it is necessary to look for alternatives to the way we live locally. This article explores the use of designing narratives and metanarratives to co-create imaginaries serving as the needed alternatives. This research starts by considering the historical factors to understand how industrialisation and the loss of traditional practices created a culture of disconnection from Nature in the Girona area, but also looks at why people start now reconnecting with it. The analysis is the foundation for speculative design practices to co-create a new local narrative of connection and regeneration. The project adopted the Integrative Worldviews Framework and used paradoxes to create possible future worldviews based on historical factors and literature. Citizens participated in conversational future-visioning workshops to develop and evaluate their local imagery of the previously created worldviews. This conversation-based exercise evidenced the potential of paradoxes in destructive futures to create imaginaries of regeneration. These imaginaries merge and form future stories. From the future narratives, the practice created cultural artefacts embodying a new culture of connection based on storytelling, traditional jobs, and a mythological understanding of Nature. Finally, as observed at the end of the project, these artefacts allow citizens to adopt them as their culture and expand their current worldview.

Keywords: Global Change, European Cultures, Design, Transitions Design, Case Studies

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1. Introduction

1.1. It's a Matter of Culture

“As Homo Sapiens’ entry in any intergalactic competition, industrial civilisation would be tossed out at the qualifying round. It doesn’t fit. It won’t last. The scale is wrong. And even apologists admit that it is not even pretty. The design failures of industrially / technologically driven societies are manifest in the loss of diversity of all kinds, destabilisation of Earth’s biogeochemical cycles, pollution, soil erosion, ugliness, poverty, injustice, social decay, and economic instability.”

– David Orr at *Earth in Mind*, 2004

Humankind is overcrossing planetary boundaries and pushing whole eco-social systems to the brink of collapse (Masson-Delmotte et al., 2021; Raworth, 2018). Throughout recent history, with intensification since the industrial revolution, we have built an extractive economy deeply rooted in a consumerist culture with far-reaching consequences across planet Earth. As David Orr (2004) describes above, our era is one of interconnected crisis; these are not just ecological such as loss of biodiversity, soil erosion, or climate change. Instead, their roots might primarily reside between our ears; their causes are embedded in and emerge from our worldviews, values, and lenses into our culture and behaviour. The extractive system further nurtured the development of an individualistic worldview defined by the disconnection among humans and the planetary and universal systems and dynamics we depend on. This individualist perception is contrary to a more systemic view of life (Capra & Luisi, 2016; Wahl, 2016) which connects locally, with scales, and the ontological position that we are part of nature. This state of individualistic disconnection from systemic interconnectedness, which is at the root of the collective socio-ecological crises we face, is characteristic of the metanarrative of our neoliberal cultures. Alternatively, other metanarratives where the connection between humans and nature abides have been and remain possible. For example, the Yaqui peoples, in Sonora (a north-western state of Mexico), consider “bawe asu” (grandma sea), “taa’a” (sun), and “meecha” (moon) as their ancestors and explain the geographical and climatic features through a tale of living beings triggering conditions for sustained life (Comision Nacional de Areas Naturales Protegidas, 2011). Through this conception, they live according to the appreciation of an interdependent life and planet. This reconnection with the complexity of the living systems and the more-than-human world, i.e., to take a more appropriate role in the Earth system, is paramount if we want to stop the current trajectory of mass extinction. Ives et al. (2020) identify this inner dimension of sustainability as the most powerful place to intervene for systemic change. However, intervening at this level of interconnected complexity can be considered a wicked problem (Rittel & Weber, 1973). Therefore, requiring radical new approaches that focus on reconnecting with the appropriate scale for Orr’s intergalactic competition. In this paper, we propose that one such approach can be found at the intersection of transition design (TD) and narrative, using TD to redesign narratives of place as a way of intervening towards more sustainable trajectories than the ones currently in prospect.

1.2 Design, (Meta)Narratives and Transitions

‘Worldviews’ are the inescapable, overarching systems of meaning and meaning-making that to a substantial extent inform how humans interpret, enact, and co-create reality. In their turn, ‘mental models’ are the filters through which we interpret our experiences, evaluate plans, and choose among possible courses of action. Thus, these could be considered the same elements of a metanarrative that functions as a lens through which we interpret the world. These are

commonly expressed through traditions, behaviours, societal structures and systems, cultural artefacts, and transmitted through stories and legends. These ‘designs’ are the building blocks that configure paradigms, and paradigms are the deepest leverage points for systemic change . Hence, if it is possible to transform a culture’s metanarratives, it may be possible this unfolds to changes in societal paradigms and readdress trajectories for the human presence on Earth (Wahl, 2016).

Because the metanarrative is behind our interpretation and informs how we relate to and are in the world, it can be found embedded in objects and systems, e.g., books imply knowledge can be expressed by human languages beyond orality and kept physically for an undetermined time; an industrial paper cup embodies a fast-paced culture with little care for materiality or immediate or non-location-dependent pleasures and so on. As most artefacts are created ‘by design’, the practice of design contributes to co-shaping the metanarratives that shape our interpretation of the world. The dynamics between worldviews and the role of design are further explored by Wahl (2021) through the analogy of the hydrological cycle shown below in fig 1. Because of rainfall, worldviews inform design, and in its turn, designs (through evaporation), modify the worldview construction. Thus, creating a mutualistic reinforcing relationship between change in metanarrative and design through objects, services, and systems. This implies a responsibility for design practice in co-shaping, positively and negatively, society’s metanarratives that co-determine which (un)sustainable futures are (im)possible and (im)plausible (Dunne & Raby, 2013).



Figure 1: Illustration of the Mutualistic Relationship Between Design, Reality and Worldviews Through, the Hydrological Cycle Analogy

1.3 Towards Transition Design for Cultural Change

This responsibility means design practice must be used critically to ensure its participation in creating new metanarratives with potential to shift socio-ecological paradigms towards more sustainable futures. The area of design engaged with transition challenges such as these is called Transition Design (TD) and actively aims to intervene on wicked problems such as biodiversity loss or the transition towards renewable energy (Iwabuchi, 2019; Schmidlin, 2018).

In this study, we present a TD-driven approach that utilizes narratology to challenge, disrupt, and transform the underlying mental constructs that inform the metanarrative of neoliberal individualism and separation. To do so, we zoom into a particular case in Girona, Catalonia, modern Spain. This is presented below in the form of an unfolding narrative, in which the relationships between TD as a practice to (re)design meta-narratives, cultures, and the emergence of alternative stories about who we could be and how we could relate to more appropriate scales, are shared. We close by reflecting on the appropriateness, challenges, and opportunities for such a TD for working with wicked problems.

2. The Case – The Four Rivers City

Girona, also known as *The Four Rivers City* by locals, is found at the confluence of four rivers in the Mediterranean basin. Part of this area is susceptible to floods and, for a long time, periodical floods caused damages to buildings and the city's inhabitants, especially to those that occupy the natural draining area of the rivers. Because of its northern Mediterranean location, it has received a strong influence from both Classical Greek and Roman cultures and has had a strong Catholic influence ever since (comparatively Arabs ruled this area for roughly six decades). At a short distance from the Mediterranean Sea and the Pyrenees Mountains, it has also been a place of transit for peoples and cultures. Yet, now the Mediterranean basin is one of the most impacted regions by global heating, and Girona is also to struggle from these climatic changes. As climate dynamics transform due to global change; floods and droughts will increase in intensity and frequency, endangering (fresh) water supplies in the city as well as the nearby metropolitan area of Barcelona who also relies on these rivers for their water supply. In addition, the projected changes place potentially severe limits on the food-production capacity in the Ter basin and strain on the ecosystems that depend on the current weather and river dynamics. Because of the historical, cultural, and economic importance of the rivers to Girona, i.e., the rivers are akin to blood flowing through the city's body, our inquiry explores the transformation of metanarrative through the lens of the way that locals relate to the rivers. That means looking at alternative understandings of the rivers to those our research found in the city's inhabitants: the river as a service, either purely instrumental or with self-entity and meaning.

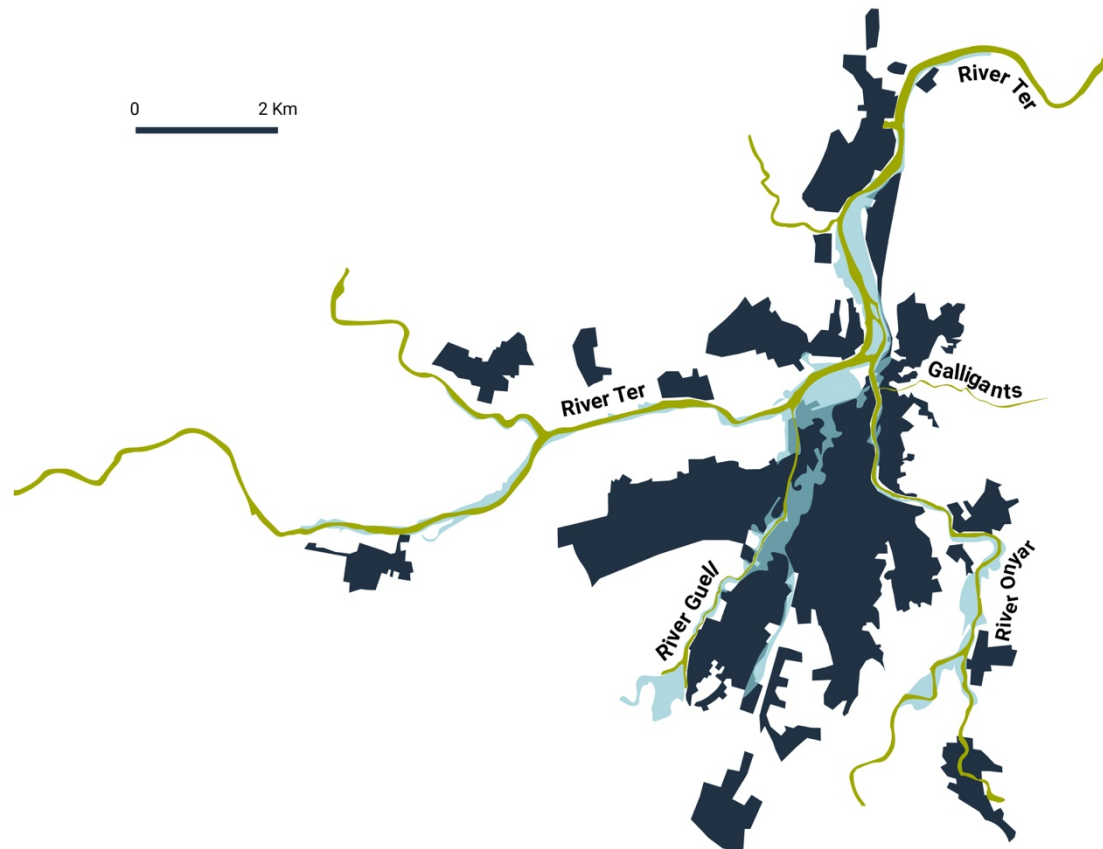


Figure 2. Map of the Girona Metropolitan Area. In Dark Blue, Built-Up Area (Excluding Roads and Other Infrastructure). In Light Blue, Flood Area for a 10-Year Return Period (Simplified). In Olive Green, Current River Stream. Based on Data from the Institute of Cartography and Geology of Catalonia (ICGC), and the Catalan Water Agency (ACA). Retrieved in 2021.

2.1 Identifying the Current Relationship to the Rivers

Cultures are formed through the result of long co-evolutionary processes that while deeply ingrained in our day-to-day lives, are easily forgotten. The TD approach starts by unwrapping the historical dynamics through which a wicked problem emerged to identify the most likely future trajectories currently in prospect. In doing so, a multiplicity of data including historical document analysis and engagement with current inhabitants is used. For the overall TD analysis, we used the narrative of transition mapping approach (Van den Berg et al., 2021). This approach utilizes abductive analysis and maps different forms of data to create a longer-term perspective of the dynamics of how a wicked problem emerged. The data for this included contemporary empirical data as well as historical documents. Among them a small-scale survey of inhabitants from the municipalities of Salt, Girona, and Sarrià de Ter. For this, we followed the protocol of Hedlund-de Witt (2013, p 144-145) for the Integrative Worldview Framework (IWF) which is a classification rubric to define western worldviews in four categories: traditional, modern, postmodern, and integrative (Hedlund-de Witt, 2013, p 264-265). The answers were classified according to the IWF profiles to provide a snapshot of citizens perspectives in the broader region. The results indicated that 34,3% of the participants hold an integrative worldview, 20,5% large postmodern, and 44,3% a largely modern perspective. It is important to note here that participation here was on a volunteer basis, and self-selection bias may have intervened with the validity of the results. In particular, we expect a broader sampling to lead to a higher percentage of modern worldview.

In addition, historical document analysis was performed on publicly available data about the history of the place, with a particular focus on identifying powerful cultural events and signs of narratives of resistance to the dominant perspectives of the historical time in which the data was situated. To do this, literature about the place's history with a focus on the use and management of water were mapped from the early 18th century onwards. This period was chosen because of the tipping point they represent in the development of modern and contemporary culture. To fill in gaps based on historical evidence, three semi-structured interviews with local experts on landscape and human-river relationships were conducted. In these interviews, particular attention was placed on the co-dynamics of forces at multi-system levels that shaped the present-day narratives surrounding Girona's rivers. Finally, the resulting transition map was translated into a feedback loops diagram (fig 3).

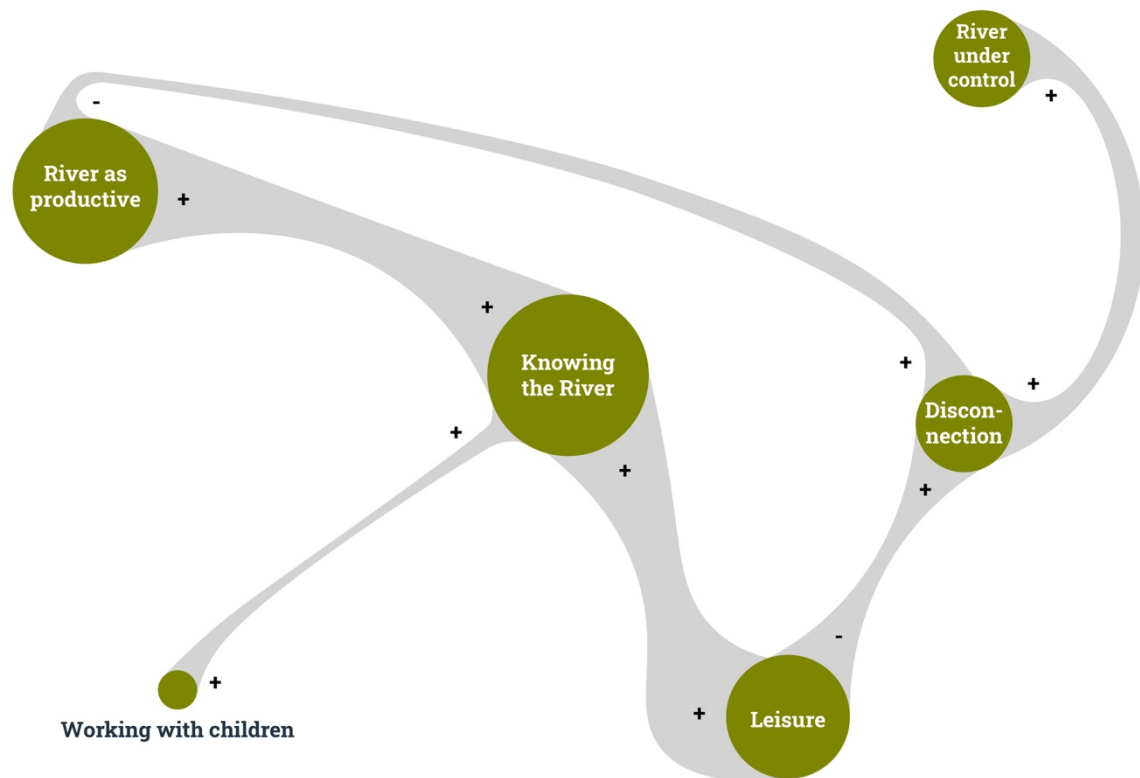


Figure 3: Simplified Feedback Loops Map About the Elements Defining Connection and Disconnection with Nature. The Width of the Relationships Indicates the Frequency They Were Mentioned. Addition and Subtraction Signs Indicate Positive and Negative Relations for Each Direction of the Relation.

2.2 Severing the Umbilical Cord with the Rivers

The current narrative around the rivers was formed through long term influence of roman law that is prevalent in global north-western societies like the understanding of ‘inviolable sacred private property’, or the ‘civic’ classical Mediterranean tradition of controlling and embellishing nature. Regionally speaking, other cultural trends played a role in constructing the current culture like the friction between the adopted Germanic brutalist conception of nature in the mid 19th century (Modernism) and the opposing Mediterranean tradition of humanising nature (*Noucentisme*). When other aspects are considered, like the impact of the industrialist culture in the city, we can reconstruct the emergence of the current place morphology,

traditional activities (or loss of them), culture and worldviews to their current state. During the past two centuries, numerous factories were built around the city because of the abundance and easy access to water. However, these activities have polluted the rivers and river shores to the point people living there couldn't use that water nor spend time near it for its insalubrious state. The canalisation of the city rivers to hide the polluted waters and avoid them from flooding the city led to a further disconnection between the inhabitants and rivers. Then, tap water access and water reservoirs allowed people to have immediate access to the liquid mineral and prevented floods while altering the natural regenerative dynamics of the river system. As water management practices favoured anthropization of the region, infrastructure created a sense of perceived safety for the Gironans. As a result, the local and collective knowledge of being in a dancing relationship with the rivers has been (largely) lost. This resulted in a contemporary disconnection of Gironans with nature, especially with the rivers, one of the most important sources of life that flows into and through the city. Through this process of disconnection, people passed the responsibility of taking care of the rivers to the, often hidden behind nameless bureaucrats and organizations. In response, popular conservation initiatives are put in place but reportedly sabotaged by human beings who prioritize their own (hedonistic) interests. Only now, with delocalised factories and production, the rise of ecological movements in the area, and more recently the global impact of Covid-19 lockdowns raising reflection over the way we live in relationship with nature, there is a budding change in the perception about natural spaces and habitats within city borders as many realised how much we need access to 'nature'. This change is aligned with the relatively high presence of Integrative leading worldviews that was found in the survey.

2.3 An Approach to Designing Cultures and Their Artefacts

Cultural changes are slow and although they can be imagined, they cannot just be designed and implemented in places and their peoples. Instead, design can influence the collective imaginary of societies and create artefacts that serve as polar stars to come. In other words, design may be able to nudge towards alternatives, perhaps even brazenly so (e.g., Dunne & Raby, 2013), but any singular artefact is unlikely to change the way people relate to the rest of the natural world. TD could play role in solving wicked problems in co-defining new futures for society and making these tangible through design artefacts as bridges from desirable potentiality to reality. This should be understood as a practice of speculation (*idem*) which allows the crafting of new imaginaries with alternative metanarratives to be created and expressed to build more sustainable futures. Then, the job of the designer is to translate these visions into everyday 'stuff', practices, or systems as an ongoing influence on metanarratives. In other words, to use design practices to make alternative ways of relating, more life-affirming ways of relating, possible.

In the case of the city of the rivers, we engaged with this through the co-creation of three distinct futures and artefacts for future human-river relationships within Girona — with special attention to embodying an appropriate relationship with the river and the Earth system. To create these futures, we began by challenging worldviews and descended to the creation of tangible artefacts that could play a part in a co-learning conversational process. This was entirely done with volunteering inhabitants of Girona. To define the three worldviews, we used two different approaches: a normative (1) and a predictive approach. The first (1), which disregards current worldviews to imagine a future worldview, focused on combining information from eight sources of literature about regenerative cultures, worldviews, and the Yaqui peoples in Sonora. We also used a second predictive approach to produce two worldviews (2 and 3) based on paradoxes of the current dominant worldviews and events

because of their potential for emergences (Wahl, 2016). All worldviews were then structured and defined according to the IWF.

Paradoxes for worldview 2	Paradoxes for worldview 3
Subjective reality and constructivism vs. technological development.	Environmentalism and nature consciousness vs. economic growth, markets, and capitalism.
Importance of nature (recognition of dependency) vs. anthropocentrism and culture of separation.	Spiritualism and meditative practices vs. knowable reality through science and technology.
	Resources, profits vs. individualism, welfare, and progress.

Table 1. Paradoxes Chose to Drive the Creation of Two of the Future Worldviews.

Yet, worldviews don't provide a picture of how the future could be — but just of how people might think. Therefore, to understand the relationships between humans and nature it is necessary to translate these into narratives of the future. This translation process is also an opportunity for further participation in the research approach by integrating people's expectations, dreams, and fears about the future, i.e., in the further co-definition of two layers of the imaginary futures: the everyday imaginary and the meaning behind those imagined futures. To enable this participation, the worldviews were transformed into a deck of cards used in 5 workshops with individuals and groups of people to trigger their imagination and define a different everyday vision of each worldview.

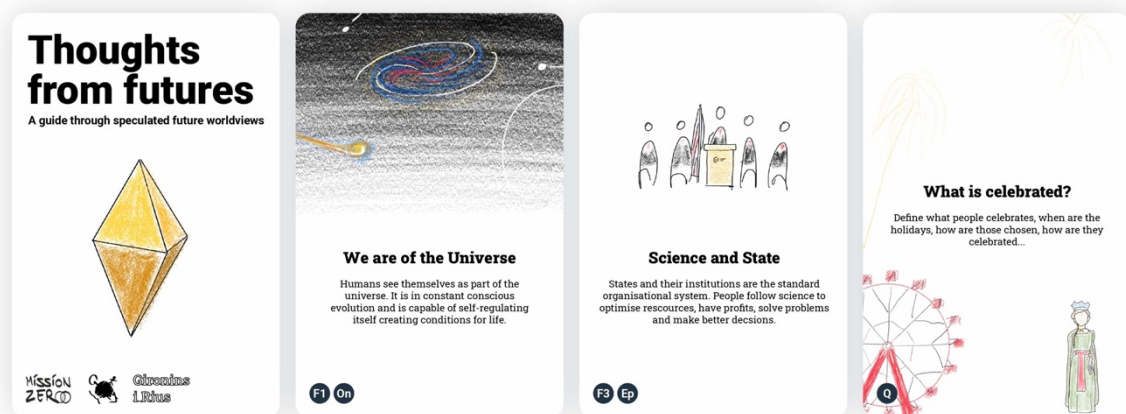


Figure 4: Illustrated Version of Some of the Cards Participants Were Given to Play with.

Participants were guided through the process with question cards about the day-to-day life of the citizens such as “what is celebrated?” and “what uses do rivers have?”. The outputs from those conversations were merged into three futures, one for each worldview. Then, a transitional narrative was made for each of the futures by backcasting to the present using the original transitional analysis 3-layer matrix and expressing it in form of speculative history-book narratives. These resulting possible narratives were thus informed by the historical data, as well as through the inhabitants in the form of workshops, representing a mosaic of desired

possibilities. These were subsequently assessed using the three-horizons framework (International Futures Forum, s.f.). Through this framework, we classified the elements of the futures as innovations towards a regenerative culture (H2+), innovations with potential but probably absorbed by the current capitalistic culture (H2-), or innovations sustaining the current paradigm of separation (H1). Finally, the definition of the regenerative future (that of worldview 1) is updated including the new insights.

The final part of this case is the translation of these regenerative futures into tangible artefacts. Although design, traditionally, has focused on object-artefacts, contemporary design disciplines broaden the scope of design. As such it could be understood that design can create “all” sorts of cultural artefacts. Cultural artefacts are concrete expressions of a culture, either on tangible objects or intangible elements as could be events, stories, traditions, or systems.

Cultural artefacts are proposed through an ideation process and reviewed to evaluate their speculative and transitional potential. To do so, the proposed artefacts were sent to three of the participants of the workshops for review, as well as three additional people involved in local environmental groups. This process was repeated for three iterations and resulted in the final artefacts presented in the rest of section 2.4

2.4 Bridging the Future and the Present

Through conversations, participants defined diverse social systems and norms, spaces, traditions, and provided new perspectives on how those worldviews influence these imagined future societies. The resulting narratives for each future expressed these transitions, as mapped in fig 5, introducing speculative events like the “Toxic soil crisis” or “Second Renaixença” (Second Catalan Renaissance, note that European Renaissance differs in time, circumstances, and characteristics from the Catalan) to literarily describe the transition, as well as a description of the new everyday as shown in table 2.

Multi-layered 9 matrix Backcasting - F₁
 Visualisation of the transitory narrative based on
 historic transitions and future-making conversa-
 tions

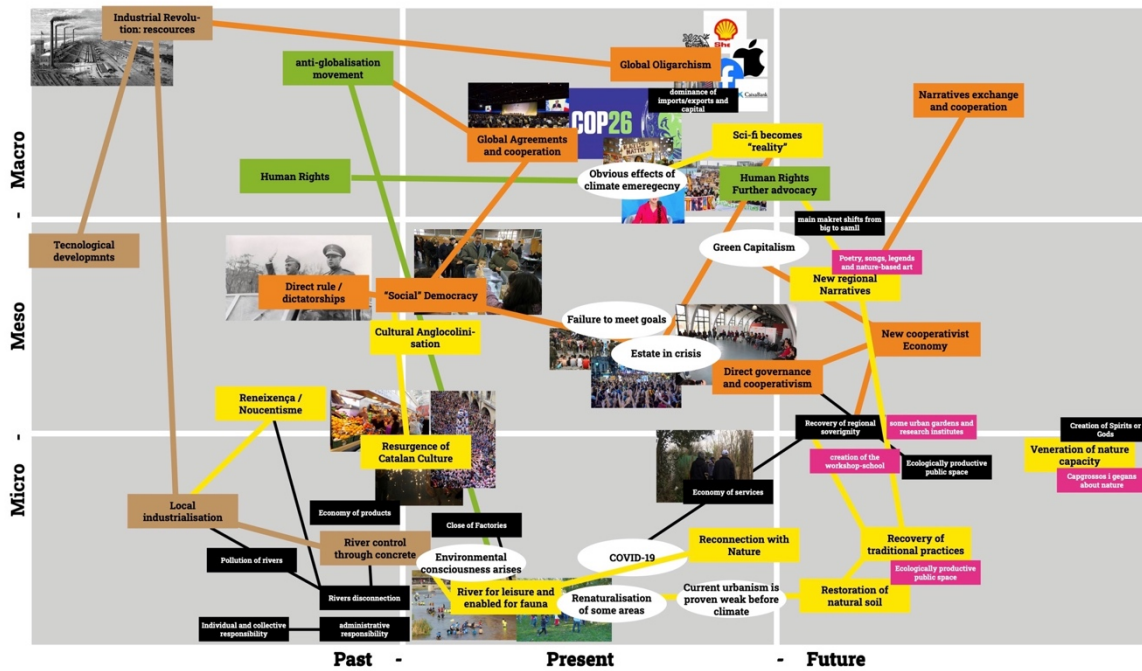


Figure 5: The Multi-Layer Matrix Used to Backcast the Speculated Future 1.

The artefact evaluation provided feedback on the metanarratives people read in the artefacts, and especially on how deeply people read into them. As result, the artefact explicitly revolves around the river and the stories as indirect associations were rarely perceived. This artefact consisted of a festival about river stories and a legend about the river’s origin that combines scientific knowledge with popular iconography and a nature-centric (although not scientific) genesis of the river and life conditions in the basin. How the worldview links down to the artefact and expresses the future, including those H2+ elements that were previously identified, is shown in the following table, and a visual expression of the festival through a poster is shown in fig 6.

Future Layer	Explanation
Worldview	Culture is perceived as universal (regarding the whole of the universe, its consciousness and all its life), yet locally specific and individually variable through multiple ways of living. Belonging to that culture exist the languages of the more-than-human world and the use of knowledge and wisdom provided by them. This requires all systems to be able to freely communicate. In the human world that is done, especially, through arts and stories. This society considers itself as part of nature, and therefore it is something productive and efficient at ensuring life continuity across scales. The power of these relations is unfolded through a symbiosis of tradition, life, and technology at the local level.

<p>Re-evaluation additions from the futureing workshops (H2+)</p>	<p>The individual exists as a part of the system, connected with its inner essence, and needs and the collective interest and needs. Modern technology provides supplementary tools for this connection and the communication with the more-than-human.</p>
<p>Everyday Imaginary</p>	<p>Local communities develop their own industry based on what they are provided and what they need, especially agriculture. Traditional practices as basketry and wicker culture are recovered as ways to provide but also as a tool for landscape and ecological stewardship. As a result, the concept of residue and waste no longer exists. Education puts far more emphasis on natural education besides linguistic and logic, and it is woven with the local culture and craftsmanship practice as means to empower young citizens to be stewards of the community and place.</p> <p>Legends and traditional stories keep being essential to co-defining the identity of the place, but with much more importance. Local and foreign stories are means to learning not only about the place worldview but also perspectives from other cultures, especially minorities. For this latter purpose, travellers and modern troubadours are storytellers bringing tales from around the world. They are also a means to understand and learn about the more-than-human world, history, and spirituality.</p>
<p>Cultural Artefact</p>	<p>The importance of the community life enables the city to keep hosting festivals of all sorts, many including stories, as <i>The Rivers Stories Festival</i> (Fig 4) where people gather to learn stories about water, remember their legends, and teach children about river agriculture and stewardship and the crafts of what the rivers provide.</p> <p>In this festival legends like the one of <i>Ter i Bastiments</i> are explained as a celebration of the sacred role of rivers for life in the region.</p>

Table 2: The Layers Comprising the Collectively Speculated Regenerative Future and Culture.

agost
8—17 2053

II Festival

de contes dels rius

**8 Conte inaugural — 9 Tarda oberta — 10 Contes americans · Llegir el riu —
11 Contes subsaharians · Contes indis — 12 Poesia i contes musicats · Contes per fer la
volta al món · Meditacions — 13 Contes i gestió ecosistèmica · Gaia i aigua —
14 Contes de la Mediterrània · Taller de cistelleria · Ceràmiques per la vida —
15 Contes nipons · Narrativa amb Kamishibai · Taller d'instruments rierencs —
16 Clausura i assemblea recopilatòria de contes**



Escolta'n
l'edició
anterior


Collectius veïnals
Àrea Urbana
de Girona

Figure 6: Speculative Poster of the River Stories Festival in Girona (In Catalan).

3. Discussion

3.1 Design and Narratology Meet for a New Society

This case in Girona displays how engaging with worldviews is a way to the creation of artefacts, but also that every artefact, irrelevant as it might seem, is an embodiment of values and ways to understand the world that unfold as metanarrative foundation of that artefact. Hence, designers should not only engage with narratives for storywashing, i.e., to market their ideas or tap into empathy from users, but as a fundamental part of design practice when engaging in co-shaping the world. This is relevant since when an artefact interacts with other actors and agents a dialogue arises from which potential futures emerge (Manzini, 2015), giving ownership of the imagined future to all parties. Through design, and subsequent dialogues that occur between users and artefacts, people accept, reject, and transform ideas and worldviews and, as result, culture evolves.

In a situation of climate emergency, it is more than ever necessary to engage in those dialogues and transitions to adopt new relational narratives that could lead to more sustainable ways of being (Ives et al., 2020). In fact, the seeming acceptance of the proposed artefacts once displayed in public could suggest there is an inner desire from people to the proposed future alternatives, although more research is required to make this claim strongly. There is, however, as has been seen by the level of engagement for this work in Girona, a place for a more metanarrative-driven TD practice. Even though the resulting artefacts of such an approach are highly contextually bound and situated in place, we believe such an approach (or others like it) could be scaled and adjusted to other places, systemic scales, and wicked problems. However, it is important to note that as the scale increases, it will become more difficult to engage with these practices in a sufficiently inclusive manner to include the key agents involved in co-constructing existing as well as future sustainable narratives of place. This is a weakness of both transition-oriented and design-oriented approaches more generally, which tend to privilege the voices of those who already hold power (Wittmayer et al., 2021).

3.2 Acknowledging the Barriers

While engaging with TD to reshape worldviews is necessary and possibly effective as a way of projecting new cultural paradigms and behaviours that allow (human) life to continue existing on Earth, it is also very ineffective at dealing with the current urgency; both as a time-consuming research approach, and because cultural changes tend to be slow and complex in general. In this study, we propose that translating TD insights into tangible artefacts can be a more pragmatic approach to create these needed shifts that could unfold towards more sustainable futures. And through this, also identify key barriers such as obstructive laws or traditional practices and customs (e.g., over-regulating food production to require unsustainable practices) that have to be transformed to make regenerative imaginaries reality. However, when engaging with this approach to design it is important to be mindful of the dynamic nature of complex adaptive systems and wicked problems. Further research into practical ways of navigating these different responsibilities and how to educate designers to work in this way is required. In particular, longitudinal engagement and studies that follow how a place develops during a process of narrative-driven TD are essential.

3.3 From Now on, Engaging with Worldviews in Co-Design

An additional limitation of these sorts of practices is the required convergence of diverse disciplines with a local embedded view, without losing sight on the way those local relationships are connected globally and situated historically. This is needed to be able to sensibly assess and explore the historic transitional narrative, be able to do so in location in a sufficiently sensitive way, and be aware of the different perspectives and unspoken events of history and identity. Besides, when working very locally but with regional or global awareness information is not always available and connecting the dots to create a more complete picture around culture requires experts to come together to find connections between their knowledge and the gathered information. For this, the use of an abductive approach could provide a pragmatic way forward. In this case, our exploration focussed on the rivers and human-nature relationships in place. Any design researcher(s) aiming to perform these practices should be knowledgeable of humanities much beyond what is normal in current educational practice, they possibly must ensure they work in a multidisciplinary team and have to nurture relationships to the place where they are working, with great cultural, social, and ecological sensibility. In other words, a different approach to design practice for sustainability transitions also asks for different knowledges, skills, and attitudes from design practitioners.

The emerging narrative-driven TD used across the project can be further improved and attuned to the particularities of each project and place. As such, in the analysis phase, it is required to improve the current worldviews evaluation tools, looking deeper at existing methodologies and improving the process by which people are clustered – or the ethics of clustering people. Also, the 3-layer matrix to evaluate the transitional narrative can be expanded to include more complex relationships, perhaps using casual loops or mixed methods combining the cause-effect, interlinked relationships, and the narrative approaches. Engaging with more experts and doing so collectively in workshops instead of interviews (or both) could be a good approach to reveal connections among their knowledge and insights that other ways could be unperceived. At the same time, questioning who counts as experts, and why they do, for these approaches is important. For this latter point, there is much that can be learned from other fields of inquiry such as the arts or anthropology.

4. Conclusions

This paper explored the possibility of using a narrative-driven TD to interact with redesigning metanarratives for transitional purposes, especially for regenerative transitions. This was explored through a case study in Girona using elements from TD as well as speculative design to create artefacts from imagined futures of human-river relationships in Girona.

The study shows promise for such an integrated approach that could lead to long term transformations of how people relate with place. Early indications that translating potential futures into tangible artefacts that embody the worldviews and values or personal elements of such sustainability (Ives et al. 2020) is powerful for establishing those were observed. But doing so requires the embracing of complexity, local cultures, and transdisciplinary engagement across a variety of expertise's, timescales, system's levels, and knowledges. Perhaps more importantly, it is essential to engage with this work with the knowledge that the work is slow. And the changes to metanarratives and cultures may never truly unfold. In a way, engaging in such a narrative-driven TD is akin to a leap of faith. That should, however, not stop design practitioners from engaging with such practices to co-create more sustainable

futures while we still have a chance to shift trajectories from the destructive path we are collectively on.

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