

A resilience-based transformations approach to peacebuilding and transformative justice

Per Olsson¹ and Michele-Lee Moore^{1,2}



Moving from a state of war or violent conflict will require a transformation, but there are no guarantees that transformations automatically lead to peace, sustainability, and justice. This review focuses on the temporary phase when a system is in limbo between the existing, dominant state and a new alternative state. We combine insights from a resilience approach to transformations with peacebuilding and transformative justice studies to focus on three roles that hybrid approaches to transformative and transitional justice may play in this phase, including 1) addressing ‘backlash’ dynamics, 2) strengthening the capacities needed to navigate cross-scale dynamics of conflict, and 3) responding to additional shocks, crises, and disturbances beyond the primary conflicts. Together, these findings advance the theoretical foundations for understanding peacebuilding as a transformative change process.

Addresses

¹ Stockholm Resilience Centre, Stockholm University, 10691 Stockholm, Sweden

² Centre for Global Studies, University of Victoria, Canada

Corresponding author: Olsson, Per (per.olsson@su.se)

Current Opinion in Environmental Sustainability 2024, 66:101392

This review comes from a themed issue on **Resilience and Peace**

Edited by **Albert Norström, Cedric de Coning, Cibele Queiroz, Jeeyon Kim, Rika Preiser and Florian Krampe**

Available online xxxx

Received: 1 March 2023; Revised: 1 October 2023;
Accepted: 21 November 2023

<https://doi.org/10.1016/j.cosust.2023.101392>

1877–3435/© 2023 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Introduction

International peacebuilding studies and practice have increasingly drawn on social–ecological system (SES) resilience theory [1–3] leading to at least three main findings. First, humans and their environment are deeply intertwined and the complex networks of relationships between and among them are part of what shapes the complexity of conflicts, security, and peacebuilding [4,5]. Second, resilience is related to the properties and capacities of a system,

and scholars have shown how working toward resilience in practice shifts the emphasis to the relationships between the structures and processes needed for building and maintaining such properties and capacities at different scales [3,6]. This focus differs from efforts that fund interventions with expectations that peace and security can be a targeted, short-term, finite game, rather than an infinite one [1]. Finally, SES resilience has provided a lens to better understand the roles of uncertainty and surprise as key features of any complex system and the way it shapes how peace may unfold in different contexts [2,7].

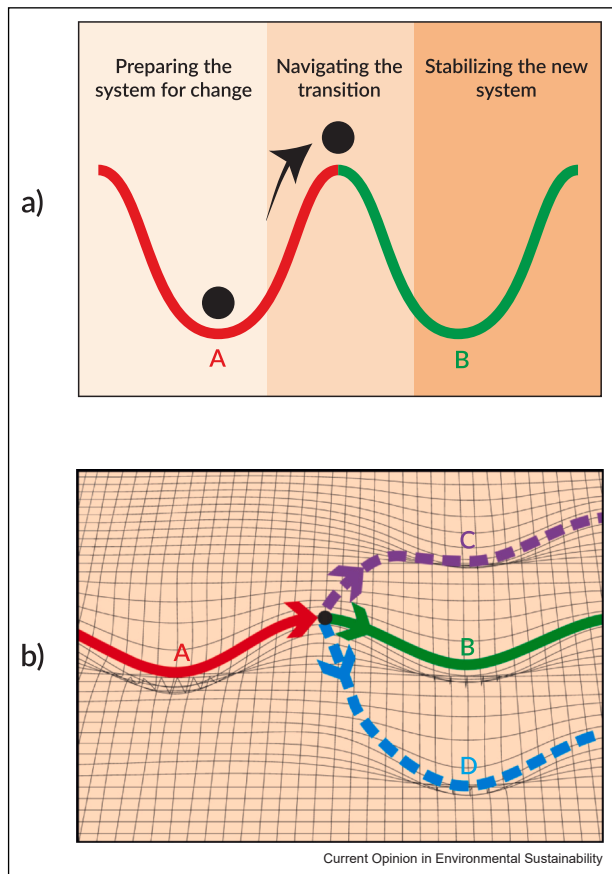
From a SES perspective, resilience is defined as the capacities of a system to respond to disturbance and change, which includes the capacities to persist, adapt, and transform [8]. From a peacebuilding perspective, it is the latter — transformation — that is of particular relevance. SES resilience scholars define transformation as a specific form of change, distinct from adaptation [8], which involves both the phasing out of an existing, dominant system, and the ability to create new pathways of development when ecological, economic, or social conditions make the continuation of the existing system untenable [9].

Shifting from a state of war or violent conflict to peace will always involve a type of transformation, but ensuring that transformations actually move toward peace, sustainability, and justice is not a guarantee. Therefore, insights from transformations theory may be useful for understanding the dynamics of this complex change process. However, SES resilience-based transformations theory developed from a long history in resource governance (e.g. [10]), rather than being specifically focused on peacebuilding. Yet, many previous transformations have involved periods of conflict and even violence [11]. Therefore, an opportunity exists to expand and strengthen both areas by combining insights. Consequently, we review resilience-based transformations research and draw on peacebuilding and transformative justice scholarship to develop a novel understanding of peacebuilding as complex, transformative change process. In particular, the review focuses on understanding the critical nature of the ‘liminal space’ — the precarious state of limbo a system may be in as it transitions from one state to another.

Reviewing transformations theory and the potential of transformative and transitional justice

Transformations have been defined as the restructuring, reconnecting, and remaking of relationships and

Figure 1



Multi-phase model of transformations processes based on the concept of multiple basins of attraction from SES resilience and complex systems theory (a) Shows the resilience-based transformations model, with a system that shifts from one basin of attraction (A, the red cup) to another (B, the green cup), over a threshold or tipping point. It also shows the three phases of transformation defined by the agency involved: 1) preparing the system for change, 2) navigating the transition, and 3) stabilizing the new system. (b) Illustrating multiple system trajectories represented by multiple basins of attraction that the 'ball' can roll into in the transition phase, due to many competing, latent attractors (C (purple) and D (blue)) (illustration by Johanna Gustafsson).

feedbacks that shape the way authority, power, and resources are structured and flow in a system, the practices and processes that reflect and reproduce those structures, the norms, values, and beliefs that underpin those structures and processes, and the way that all of these are intertwined with ecological systems across multiple scales [12,13].

Early theoretical frameworks were informed by the idea that any system has multiple basins of attraction (or multiple stability basins), and transformation involves moving from one basin or state to another [14] (Figure 1a). Each basin or state involves different system configurations,

which will be held in place by different sets of self-reinforcing feedbacks and organized around specific attractors (Figure 1a). Therefore, transformations include diminishing the strength of negative attractors and the self-reinforcing feedback relationships of the dominant state as well as generating new attractors and feedbacks in alternative basins.

Attractors refer to the patterns of how the system behaves and self-organizes that contributes to an overall state over time, and have been described in metaphorical terms to 'attract' the system's behavior [15]. Attractors can have different strengths and are represented by the depth of each basin, with a deep basin symbolizing a strong attractor that is difficult to transform even when the system experiences disturbances, while a relatively shallow basin can be more easily tipped when disturbed [14–16]. In any transformation process, new attractors may just be emerging and not-yet fully formed, existing only as 'niches' or 'pockets' of innovations [17], also referred to as latent attractors [18]. Attractors in a SES could include certain temperature, soil, or water conditions, and the way these could become intertwined with hopeful, newly articulated visions, narratives, and imagined futures, which may themselves be attractive enough that new relationships or feedbacks can begin to organize around them [19]. Building on the multiple basins of attraction concept, early frameworks from SES resilience-based transformations have described transformations as involving at least three phases in which actors in any system will be engaged: 1) preparing the system for change, 2) navigating the transition, and 3) building the resilience of the new system (see Figure 1a) [20].

Applied in a peacebuilding context, transformations might mean preparing to shift away from certain entrenched political ideologies toward new visions that address historic grievances [2,15] in order to move from a state of conflict to one of peace. However, SES resilience-based transformations theory highlights that the transition phase between one basin of attraction to another can be highly contested, where multiple visions, ideas, and attractors are competing [10,20,21]. Thus, the original depiction of transformation processes must be thought of beyond the two-dimensional representation. Resilience scholars describe systems as having *landscapes* with multiple basins of attraction [14,22,23], and thus, at the crest between two basins, the metaphorical 'ball' could roll into any number of directions across that landscape (Figure 1b). This might mean moving to a state of peace, sustainability, and justice (sometimes referred to as 'positive attractors'), or it could return to the previous basin, or even toward a number of negative attractors [18]. Given the precarity involved in the transition phase of any transformation process, we argue that it may be critical for a temporary, shallow basin of

attraction to be developed. This requires recognizing that the transition phase itself is a state, albeit a more temporary one to the other phases.

Transformative justice, a research field and practice developed out of transitional and restorative justice [2,24,25], may create the conditions necessary to deal with the uncertainties, volatility, and resistance that can emerge in this transition phase. Transitional justice approaches, such as truth commissions, criminal prosecutions, and formal apologies, have been criticized for prioritizing narrowly defined and standardized legal approaches controlled by states or international bodies, even though their original conception and intention was broader and deeper [26–28]. Transformative justice focuses more on the social and political nature of accountability and healing, making the everyday concerns of victims, communities, and collectives more visible [25,29,30]. Evidence shows conventional transitional justice approaches remain crucial [26,27], but only if these occur alongside collective and community-based approaches to accountability that address the social, economic, and political inequalities that shaped conflicts and harms [27,30,31]. We argue that the suites of activities stemming from hybrid approaches to transformative and transitional justice may serve as a temporary attractor that establishes a type of liminal space — referring to the threshold space between system states or the space between what has been and what will come next (Figure 2). In essence, transformative and transitional justice approaches may provide the means to sustain the complex, messy processes of both reconfiguring into the new, while addressing the legacies of the previous basin of attraction [2,25,32].

Our review of both resilience-based transformations and transformative justice scholarship highlights three dynamics that can affect the transition phase. First, we draw on evidence that shows how backlash dynamics can disrupt the transition phase, and suggest that transformative justice approaches may help to address the risks backlash poses. Second, using lessons learned from failed attempts to transform, or those that have not yet succeeded, we argue that navigating the transition between conflict or war to peacebuilding will require specific capacities to navigate the cross-scale dynamics of the conflict. We review which aspects of agency and which capacities may be supported by transformative justice in the transition phase and why. Third, during any conflict–peace transformation, and during any transitional and transformative justice process, additional crises can arise. SES resilience-based transformations scholarship provides insight into how shocks and crises can affect whether transformations to peace, sustainability, and justice may unfold or not, while transformative justice literature shows how to prepare for such crises. Together, this scholarship helps us better understand peacebuilding as complex, transformative change processes.

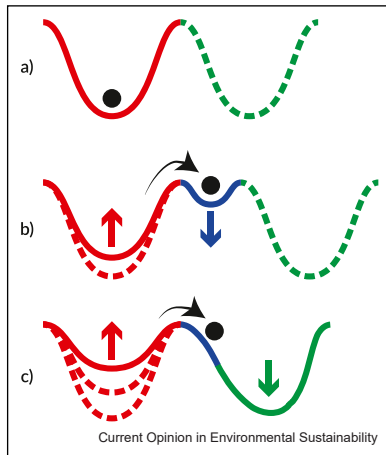
Navigating backlash

Evidence indicates that the period of limbo between basins of attraction that marks the transition phase may include periods of intense conflict and violence [33,34]. These backlash dynamics can hinder a transformation by disrupting the transition phase. For example, in South Africa, conflict remained violent throughout the four years (1990–1994) when the new constitution was written (see, e.g. [35]). Other examples of violence flaring up in response to signs that transformative change is beginning include the 16th Street Baptist Church bombings in Birmingham, Alabama, in 1963 as a response to increased civil rights in the United States [36], hate-speech as a reaction to increased Indigenous rights in the case of Girjas Sami village, Sweden [37], and violent opposition to the Spanish transition toward democracy in the late 1970s and early 1980s [38]. The concern then becomes ensuring that the transition to peace, sustainability, and justice is itself peaceful, sustainable, and just. We contend that transformative justice, in combination with context-sensitive approaches to transitional justice, can play a critical role in ensuring sufficient space and time are created to take seriously the concerns of those engaged in backlash, without allowing it to deepen or strengthen the attractor of the preexisting state. Since there is a landscape of possible basins of attraction, it must be recognized that some efforts by various groups in the preparation phase may represent different and competing directions for change, some more benign than others. Therefore, transformative justice approaches will need to create capacity to hold the tensions created by diverse, conflicting efforts while generating momentum toward more peaceful attractors [30].

Navigating cross-scale dynamics

SES transformations scholarship indicates a variety of capacities may be needed for the multiscale and multi-phase processes of transformation, including capacities for rapid hospicing to honor, grieve, and address the losses and legacies of the dominant system [39,40], system reflexivity to see and adapt to the constraints and opportunities shaped by institutions and structures that exist across multiple scales during this phase [41], as well as capacities to envision and self-organize to support the emergence of new states [41]. Recognizing the intertwinedness of SES also treats the relationship between humans and the environment as a capacity; thus, strengthening the connection to the biosphere can be a crucial part of approaches to healing, revitalizing identities, culture, language, and more that has been damaged through conflict (see, e.g. [42]). These capacities overlap with what scholars have shown are the focus of transformative justice approaches [29,30]. Such evidence reinforces the idea that transformative justice may play a critical role in creating the liminal space needed for strengthening these capacities. However, without space

Figure 2



Transformative justice work can target both basins to generate and then shift to new and temporary attractors but also weaken the strength of the old attractors (to make the red cup shallower). (a) The red basin of attraction or ‘cup’ is the current system state, with negative attractors, that needs to be transformed. The dotted green line is the future basin of attraction and the imagined, transformed state of the system, with new, positive attractors. (b) Since the transition phase can be difficult to navigate (due to high level of uncertainty and surprise and latent, competing, and negative attractors), transformative justice can help create a temporary, shallow basin of attraction (in blue). Thus, it can provide a liminal space when moving from one state to another. (c) This can create enough time and space for the activities needed to navigate the transition toward the imagined state and new attractors (in green) (illustration by Johanna Gustafsson).

and attention to the cross-scale dynamics of the conflict, transformations may not be possible. For example, the different social movements involved in the uprisings referred to as ‘Arab Spring’ can be understood to have effectively weakened the attraction to the dominant regime’s basin. Yet, the countries continue in their struggle to navigate toward the basins of attraction that might have been hoped for by those engaged in the uprisings [28]. Numerous factors affect the ongoing process, but one possible factor is that more capacity may have developed for weakening the attractor of one state, without addressing the ongoing forces of uncertainty and conflict that emerge from cross-scale dynamics. Research has shown how these cross-scale dynamics, such as intense pressures from the international community, have suppressed the capacities available within those contexts to both build attractors for another state and navigate the liminal space between them [28,32] (Figure 2).

Navigating crisis

Any efforts to create a temporary attractor through transitional and transformative justice will need to continually respond to additional, unanticipated crises or disturbances. Resilience scholars have explored the role of crises, including economic, ecological, or sociopolitical

shocks, natural disasters, and pandemics in transformation processes [10,20,43,44]. More specifically, they have focused on the role of these for creating ongoing formative moments, learning, and for creating different opportunity contexts for transformation [10,40,44]. While evidence indicates that large-scale societal change may emerge following crises, the consequences are not always better, more peaceful, sustainable, nor just [40,45]. Moreover, whether transformation emerges may be different from one context to another [10,46]. For example, studies of the post-disaster peacebuilding in Sri Lanka and Aceh, Indonesia following the 2004 Indian Ocean earthquake and tsunami, show the contrast in impacts [47]. In Sri Lanka, the disaster deepened and intensified the armed conflict between the Sri Lankan government and the separatist Liberation Tigers of Tamil Eelam, while in Aceh, a historic peace agreement between the Indonesian government and the separatists was generated [47]. While numerous factors contributed to these differences, the example shows that a crisis could contribute to a strengthening of a dominant attractor or ‘locking in’ of one basin or it may lower the threshold between basins enabling a rapid transition toward a new attractor (Figure 2). Given that crisis can lead to such diverse outcomes, existing evidence does not amount to a blueprint for navigating such dynamics. However, previous research has shown that preparing a system to transformation may better prepare it to respond to crises [40,44]. Therefore, while transitional and transformative justice processes will be affected by ongoing crises and surprise, it is possible that the processes themselves may increase the readiness and capacity to continue to respond to additional crises.

Conclusion

We argue for combining resilience-based transformations and transformative justice research to consider the complex dynamics of peacebuilding, given that peacebuilding processes are a form of crisis-driven transformation. However, we also suggest that combining these sets of literature is valuable for additional reasons. Beyond peacebuilding efforts, numerous calls are being made for many different transformations, such as the transformations of food and energy systems [48] and those related to climate change. Most transformations are expected to involve friction, conflict, and resistance [49], and thus, understanding how to navigate transformation processes peacefully, sustainably, and with justice remains an urgent question.

In reviewing and combining these literatures, we argue that the transition phase of transformation processes can be better understood as its own specific, temporary state. This phase represents a period of in-betweenness, but one that is critical given the landscape of basins of attraction that may exist, some of which may represent peace,

sustainability, and justice, but some of which may not. Transformative justice approaches, in combination with context sensitive transitional justice processes, may play a critical role in creating a temporary liminal space that can support strengthening the capacities for navigating the complexity of simultaneously weakening one attractor while nurturing and strengthening another, and the myriad of backlash, cross-scale, and crisis dynamics. Amidst tensions, conflicts, and war, hope remains as seeds for peacebuilding emerges, and this review is intended to be in service to those on the frontlines of the most difficult and dangerous transformative change efforts.

Data Availability

No data were used for the research described in the article.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgements

We are grateful to the two anonymous reviewers whose feedback and engagement with our ideas has greatly improved this paper.

References and recommended reading

Papers of particular interest, published within the period of review, have been highlighted as:

- of special interest
- of outstanding interest

1. de Coning C: **Adaptive peace operations: navigating the complexity of influencing societal change without causing harm.** *Int Peace* 2020, **27**:836-858.
2. Clark JN: **Thinking systemically about transitional justice, legal systems, and resilience.** In: *Multisystemic Resilience: Adaptation and Transformation in Contexts of Change*. Edited by Ungar M). O Oxford University Press; 2021, <https://doi.org/10.1093/oso/9780190095888.003.0028>.
This article adopts a resilience lens to transitional justice. The author contends that transitional justice processes have been too limited in practice, and as a consequence, there are growing calls for more comprehensive forms of justice; in this case, termed transformative justice. The author concludes that a resilience lens offers new frameworks and systemic approaches that are based on broader social-ecological systems and it can help to overcome piecemeal approaches to transitional justice, understand how to enhance resilience, understand the opportunities that can be created from past shocks, and explore how the adaptive capacities of legal systems interact with broader systemic frameworks.
3. Juncos AE, Joseph J: **Resilient peace: exploring the theory and practice of resilience in peacebuilding interventions.** *J Interv State* 2020, **14**:289-302.
This article does a thorough review of the resilience concept and explains the contribution of resilience thinking to peacebuilding. The contribution includes a focus on complexity and a systems approach and an emphasis on local capacities and the role of human agency.
4. Queiroz C, et al.: **Investment in resilient food systems in the most vulnerable and fragile regions is critical.** *Nat Food* 2021, **2**:546-551.
5. Broek E, et al.: **Environ Peace: Security in a New Era of Risk.** SIPRI; 2022, (<https://www.sipri.org/publications/2022/other-publications/environment-peace-security-new-era-risk>).
6. Lee S: **Local resilience and the reconstruction of social institutions: recovery, maintenance and transformation of Buddhist Sangha in Post-Khmer Rouge Cambodia.** *J Interv State* 2020, **14**:349-367.
7. Juncos AE, Bourbeau P: **Resilience, gender, and conflict: thinking about resilience in a multidimensional way.** *J Int Relat Dev* 2022, **25**:861-878.
8. Folke C, et al.: **Our future in the Anthropocene biosphere.** *Ambio* 2021, **50**:834-869.
9. Feola G, Koretskaya O, Moore D: **(Un)making in sustainability transformation beyond capitalism.** *Glob Environ Change* 2021, **69**:102290.
10. Herrfahrdt-Pähle E, et al.: **Sustainability transformations: socio-political shocks as opportunities for governance transitions.** *Glob Environ Change* 2020, **63**:102097.
This article synthesizes the current understanding of SES resilience transformations and develops an analytical framework for understanding: i) transformations as multilevel and multiphase processes, ii) the capacities needed to navigate these, and iii) the role of social-political shocks. It highlights the combination of cognitive, structural, and agency features involved in transformative change.
11. Scoones I, et al.: **Transformations to sustainability: combining structural, systemic and enabling approaches.** *Curr Opin Environ Sustain* 2020, **42**:65-75.
12. Moore M-L, Milkoreit M: **Imagination and transformations to sustainable and just futures.** *Elem: Sci Anthr* 2020, **8**:081.
13. Abson DJ, et al.: **Leverage points for sustainability transformation.** *Ambio* 2017, **46**:30-39.
14. Scheffer M, Carpenter SR: **Catastrophic regime shifts in ecosystems: linking theory to observation.** *Trend Ecol Evol* 2003, **18**:648-656.
15. Vallacher RR, Coleman PT, Nowak A, Bui-Wrzosinska L: **Rethinking intractable conflict: the perspective of dynamical systems.** *Am Psychol* 2010, **65**:262-278.
16. Hazy JK, Goldstein J, Silberstang J: **A complexity science model of social innovation in social enterprise.** *J Soc Entrep* 2010, **1**:101-125.
17. Metelerkamp L, Biggs R, Drimie S: **Learning for transitions: a niche perspective.** *Ecol Soc* (1) 2020, **25**:14.
18. Malka SC: **On the blessings that chaos brings: a closer look at conflict through the lens of chaos theory.** *J Confl Manag* 2021, **7**:1-17.
19. van der Leeuw S, Folke C: **The social dynamics of basins of attraction.** *Ecol Soc* 2021, **26**:33.
20. Olsson P, et al.: **Shooting the rapids: navigating transitions to adaptive governance of social-ecological systems.** *Ecol Soc* 2006, **11**:18.
21. Moore M-L, et al.: **Studying the complexity of change: toward an analytical framework for understanding deliberate social-ecological transformations.** *Ecol Soc* 2014, **19**:54.
22. Westley F, et al.: **Tipping toward sustainability: emerging pathways of transformation.** *AMBIO* 2011, **40**:762.
23. Donges JF, Barfuss W: **From math to metaphors and back again social-ecological resilience from a multi-agent-environment perspective.** *GAIA* 2017, **26**:182-190.
24. Nocella AJ, Anthony J: **An overview of the history and theory of transformative justice.** *Peace Confl Rev* 2011, **6**:1-10.
25. Gready P, Robins S: **From transitional to transformative justice: a new agenda for practice.** *Int J Transit Justice* 2014, **8**:339-361.
26. Sharp DN: **Crisis, faith, and transformation in transitional justice.** *Beyond Transitional Justice: Transformative Justice and the State of the Field (or Non-field)*. Routledge; 2022:24-33.

27. Destrooper T: **Understanding the unforeseen consequences of an incomplete transitional justice ecology in the philippines.** *J Curr Southeast Asian Aff* 2023, **42**:168-189.
28. Nassar H: **Justice as resistance: how post-Arab Spring experiences are reshaping the global transitional justice landscape.** *Int J Transit Justice* 2022, **16**:181-186.
29. González-Hidalgo M, Del Bene D, Iniesta-Arandia I, Piñeiro C: **Emotional healing as part of environmental and climate justice processes: frameworks and community-based experiences in times of environmental suffering.** *Political Geogr* 2022, **98**:102721.
30. Bräuchler B: **Creative peacebuilding and resistance in Indonesia.** *Asia Pac J Anthropol* 2022, **23**:1-19.
31. Lambourne W: **Transformative justice, reconciliation and peacebuilding (Chapter 1).** *Transitional Justice Theories.* Routledge; 2014.
32. Aboueldahab N: **Transitional justice as repression and resistance: practices in the Arab world.** *J Int Crim Justice* 2022,mqac027, <https://doi.org/10.1093/jicj/mqac027>
33. Stedman SJ: **Spoiler problems in peace processes.** *Int Secur* 1997, **22**:5-53.
34. Hartwell MB: **Violence in peace: understanding increased violence in early post-conflict transitions and its implications for development.** In *Advancing Development.* Edited by Mavrotas G, Shorrocks A. Palgrave Macmillan; 2007:135-146, https://doi.org/10.1057/9780230801462_8
35. Rueedi F: **The hostel wars in apartheid South Africa: rumour, violence and the discourse of victimhood.** *Soc Identit* 2020, **26**:756-773.
36. Anderson SW: **The past on trial: Birmingham, the bombing, and restorative justice.** *Calif Law Rev* 2008, **96**:471-504.
37. Junka-Aikio L: **Toxic speech, political self-Indigenization and the ethics and politics of critique: notes from Finland.** *The Sámi World.* Routledge; 2022:310-327.
38. Edles LD: **Symbol and Ritual in the New Spain: The Transition to Democracy after Franco.** Cambridge University Press; 1998, <https://doi.org/10.1017/CBO9780511557774>
39. de Machado Olivier V: **Hospicing Modernity: Facing Humanity's Wrongs and the Implications for Social Activism.** North Atlantic Books; 2021.
- This book addresses both the need to divest from the practices, behaviours, and the taken-for-granted norms and beliefs that currently serve as a barrier to any attempt to generate transformations to sustainability and justice, and provides guidance for how that divestment can be done with accountability, honor, humility, and even humor.
40. Moore M-L, et al.: **Disrupting the opportunity narrative: navigating transformation in times of uncertainty and crisis.** *Sustain Sci* 2023, **18**:1649-1665.
41. Moore M-L, Olsson P, Nilsson W, Rose L, Westley FR: **Navigating emergence and system reflexivity as key transformative capacities: experiences from a global fellowship program.** *Ecol Soc* (2) 2018, **23**:38.
42. Westoby R, McNamara KE, Clissold R: **Ways of healing in the Anthropocene.** *Clim Dev* 2022, **14**:67-74.
- This article weaves various disciplinary fields including disaster studies, peace studies and is attentive to Indigenous ways of knowing with regards to healing and navigating crisis/disaster/shock. In particular, the authors point to the role of agency, place-based relationships, and nature as key to inter- and intra-generational justice and emphasize the need to depart from individualistic approaches to healing to processes that are rooted in holistic, and more collective well-being with each other and with the Earth system.
43. Benessaiah K, Eakin H: **Crisis, transformation, and agency: why are people going back-to-the-land in Greece?** *Sustain Sci* 2021, **16**:1841-1858.
- This article explores the role of the agency during the crisis and the ways that shape whether a transformation is possible during a crisis. It illuminates the ways in which personal transformations are linked with broader normative shifts in society, and how these interact during crises.
44. Brundiers K: **Leveraging disasters for sustainable development.** *Environ: Sci Policy Sustain Dev* 2020, **62**:15-27.
45. Zakeri B, et al.: **Pandemic, war, and global energy transitions.** *Energies* 2022, **15**:6114.
46. Geels FW, Pereira GI, Pinkse J: **Moving beyond opportunity narratives in COVID-19 green recoveries: a comparative analysis of public investment plans in France, Germany, and the United Kingdom.** *Energy Res Soc Sci* 2022, **84**:102368.
47. Klitzsch N: **Disaster politics or disaster of politics? Post-tsunami conflict transformation in Sri Lanka and Aceh, Indonesia.** *Coop Confl* 2014, **49**:554-572.
48. Sachs JD, et al.: **Six transformations to achieve the sustainable development goals.** *Nat Sustain* 2019, **2**:805-814.
49. Dabelko GD, et al.: **Navigating a Just and Peaceful Transition: Environment of Peace (Part 3).** SIPRI; 2022, (<https://www.sipri.org/publications/2022/navigating-just-and-peaceful-transition-environment-peace-part-3>).