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A Perspective on the Role of Emotions for Transformative Capacities and Climate Resilience

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Abstract

Emotions are a neglected topic in the study of social climate resilience and transformative capacities. Yet emotions are a key driver of human behavior. Therefore, in this article, we present a perspective on how transformative capacities are conditioned through emotions. We map different emotions and their influence and relationship to transformative processes. We find that emotions are particularly relevant in the context of problem recognition, shared responsibility, reorientation, and collective action. We conclude that emotions are central to understanding responses to and capacities for transformation and resilience building, but remain under-researched.

Keywords social resilience, emotion, sustainability transformation, transformative capacity, climate change

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1. Introduction

In the context of great uncertainties and threatening changes due to climate change, the notion of social resilience has become a central concept. It encompasses the ability of social groups and individuals to cope, adapt, or transform in response to different types of social and environmental pressures or threats (Keck & Sakdapolrak, 2013). Social resilience is one approach through which climate resilience can be addressed. In addition to adaptive and coping capacities, transformative capacities, in particular, have been described as an essential part of social resilience, as they represent the ability of social actors to leverage agency and proactively shape processes of change rather than merely react to global challenges (Keck & Sakdapolrak, 2013; Ziervogel et al., 2016). The question of how these capacities can be strengthened and which key factors play a central role has been a vital research question across the social sciences. In this context, various scholars have emphasized the influence of social relations and network structures (Boelens, 2008; Hoogesteger, 2015), institutions and power relations, and knowledge and discourses, all of which lead to different conditions for human agency (e.g., Adger, 2009; Imperiale & Vanclay, 2023; Keck & Sakdapolrak, 2013; Smith et al., 2012). While these aspects provide important explanations for the development of social resilience capacities to climate change, we argue that another aspect plays an important but so far neglected role: emotions.

Resilience and the corresponding human responses to climate change are often discussed in terms of economic and policy interventions, but studies also show that they are also a matter of emotional distress and adaptation (e.g., Ojala et al., 2021). Moreover, climate change denial and the failure to implement sustainable behaviors can be a matter of collective avoidance of certain emotional states (Norgaard, 2010; Gifford, 2011) that occur particularly in inter-group settings (Engler et al., 2019). Approaching these issues through an emotional lens, such as the geographies of care (Lawson, 2007), recognizes that the effects of crisis and transformation are manifested and enacted at multiple scales, including the body, by triggering broad and diverse emotional responses. Similarly, transformative capacities and the ability of social actors and collectives to change their ways of life can arise from collective joy or fear of serious negative events (e.g., Engler et al., 2019).

Thus, in this perspective, we aim to expand the conceptualization of transformative capacities as social resilience beyond the aspects that have been elaborated and explored so far by including emotions as a fundamental aspect of social behavior and action. In particular, we map individually embodied and socio-culturally embedded emotions and their relationship to transformative capacities as social (climate) resilience. We describe how emotions accompany, drive, or hinder the ability of individuals and collectives to transform in the face of climate-induced extreme weather events, irreversible changes in landscapes, and changes in socio-material structures. Finally, we draw conclusions for the governance of resilience building and transformative capacities.

2. A Brief Conceptualization of the Nature and Facets of Emotions in the Context of Resilience as Transformative Capacities

In general, emotions and their influence on social interactions and human behavior have been theorized in various fields ranging from philosophy (e.g., Nussbaum, 2015) to sociology (e.g., Flam, 1990a; Flam, 1990b) and psychology (e.g., Kahneman, 2011, Stoknes, 2015). Emotions are fundamentally psychological phenomena that are culturally shaped (Bericat, 2016). The literature distinguishes between primary and secondary emotions. The former "are considered universal, physiological, evolutionary, … biologically and neurologically innate" (Bericat, 2016, p. 492), for example, the fear of a newborn baby, "while secondary emotions, which can be a result of a combination of primary emotions, are socially and culturally conditioned" (Bericat, 2016, p. 492), for example, the socio-culturally conditioned joy when one's football team wins.

Following González-Hidalgo and Zografos (2020), we broadly conceptualize emotions as the assemblage of feelings, attitudes, moods, and emotional expressions influenced by power relations. While we do not follow any particular paradigmatic understanding of emotions, we do understand emotions from a—broadly speaking—social science perspective, that is, as socio-culturally constructed and socially effective. Consequently, emotions are individually and collectively enacted, often transcending individual-collective differentiations. They are the product of social relations and interactions and, conversely, influence social and societal processes as well as create conditions for human agency (Ahmed, 2014).

Unlike other dimensions of the social (e.g., knowledge, values, or norms), emotions are closely tied to the physicality of subjects and their embodiment through individuals' facial expressions, sounds, and gestures: Tears can symbolize fear, red skin can represent anger, and loud laughter is perceived as embodying joy (Bericat, 2016). Emotions are mainly neglected and not explicitly considered in economic and political affairs and policy interventions, where the priority typically lies with objectivity and rationality (Ahmed, 2014). Yet, as argued by Anderson and Smith (2001) "emotionally heightened spaces may usefully illustrate the way that social relations are mediated through feelings and sensibility" (p. 8). Emotions set people in motion (Illouz, 2007/2016). Flam's (1990a; 1990b) model of the *emotional man* describes how practices and behavior are also influenced by emotions, especially when it comes to collective (including voluntary) actions (e.g., that of Fridays for Future), which can be motivated by pleasant emotions (e.g., joy) directed towards one's collective. Unpleasant emotions, such as fear or anxiety, can also accompany collectives, but they are usually directed outward, toward issues or collectives from which one's collective wishes to separate itself (Flam, 1990a). Hochschild's (2016) study of communities in Louisiana describes how uncomfortable emotions can lead to inaction on climate change. Although Hochschild's interviewees experience fear in the face of climate change, the fear is very diffuse, and they are paralyzed. They continue their practices and stick to their routines rather than actively engage in both mitigation and adaptation or local resilience building because climate change is a global phenomenon over which they feel they have no control (Hochschild, 2016; see also Norgaard, 2010). Finally, emotional states, such as indifference, can lead to inaction on pressing issues (Bostrom et al., 1994; Weber, 2006).

This brief overview describes how emotions are an integral—yet often neglected—part of processes of change (see also Bogner et al., 2024), and feminist geographers have long advocated for emotions and ethics of care and responsibility as a fundamental part of social relations (Staeheli & Brown, 2003; Lawson, 2007). In our view, this has two important implications for the study of climate resilience: First, it requires researchers to recognize that drastic social or natural changes and transformations evoke subjective emotional responses. Second, by privileging only objective observations in knowledge production and bypassing the subjective emotional landscapes, a constitutive part through which social relations are mediated is neglected. In what follows, we offer a perspective on how to open this black box by discussing emotions as a social dimension through which transformative capacities are conditioned.

3. The Role of Emotions in Social Resilience as Transformative Capacities

In general, social resilience is dynamic and can be understood in terms of coping capacities, adaptive capacities, and transformative capacities (Keck & Sakdapolrak, 2013). In what follows, we focus on transformative capacities, as these describe conditions for the agency of individuals and communities to proactively and *ex-ante* shape and initiate processes of change. This goes beyond an *ex-post* response to crisis events (coping capacities) or an ex-ante incremental adjustment to future challenges (adaptive capacities) but might also incorporate processes of (climate change) mitigation. We argue that building transformative capacities is a key enabler for active engagement toward more resilient social systems in the face of ongoing climate change. According to Keck and Sakdapolrak (2013, p. 11), transformative capacities

> encompass people's ability to access assets and assistance from the wider socio-political arena (i.e. from governmental organizations and so-called civil society), to participate in decision-making processes, and to craft institutions that both improve their individual welfare and foster societal robustness toward future crises.

Three distinct aspects, namely social relations and network structures, institutions and power relations, and knowledge and discourses, play a central role in understanding social resilience and building transformative capacities (Keck & Sakdapolrak, 2013). These three aspects leave room for interpretation, for different ways of approaching resilience and transformative capacities, but tend—unintentionally—to neglect the role of emotions.

To gain a deeper understanding of how emotions condition and affect transformative capacities, we draw from Wolfram's (2016) framework for *urban transformative capacity*[1]. This framework is spatially sensitive in focusing on urban spaces while outlining specific dimensions relevant to strengthening urban transformative capacity. It is interdisciplinary,

combining insights from different fields (e.g., political economy, development studies, and sustainability transitions) for the study of urban power to change. It gives a detailed overview of different conditions that create opportunities for transformative capacity. This includes ten key components, namely (1) inclusive and multiform governance, (2) transformative leadership, (3) empowered and autonomous communities of practice, (4) system(s) awareness and memory, (5) sustainability foresight, (6) community-based experimentation, (7) innovation embedding, (8) reflexivity and social learning, and (9) working across human agency levels and (10) across geographical scales (Wolfram, 2016). We build on this framework to map the dimensions through which transformative capacity is conditioned by emotions. Based on a screening of academic literature, we identify various emotions that accompany and affect transformative capacity in different ways (see Table 1). In doing so, we understand emotions both as a dynamic, socially shared, and constructed dimension—not as "simple levers," (Chapman et al., 2017, pp. 850–852)—of transformative capacity and as a condition for human agency that has been rather neglected.

Since many results often cannot be precisely assigned to one of the 10 specific components (because they were not collected to contribute to the concept of transformative capacity), we cluster four overarching areas in which emotions are particularly relevant to Wolfram's (2016) concept of transformative capacity: *a) recognizing problems and the need for change, b) sense of relatedness and collective responsibility, c) building visions and realigning values,* and *d) acting differently and innovating* (see Table 1).

Table 1 Exemplary Overview of Emotions and How These Create Rather Enabling or Constraining Conditions in the Context of Transformative Capacity

Set of transformative capacities	Rather enabling emotions and emotionally shaped (re)actions	Rather constraining emotions and emotionally shaped (re)actions	Transformative capacity described by Wolfram (2016)
a) Recognizing problems and the need for change	Irritation, (light) stress, discomfort, worry, leaving comfort zones, confusion (Förster et al., 2019; Grund et al., 2023; Mälkki & Green, 2014; Ulusoy, 2016; Verplanken et al., 2020)	(Heavy) stress, worry, fear, anxiety, panic, depression, feeling threatened, losing grip, denial, withdrawal, escape, missing trust, being fond of current mode and current self (Bogner et al., 2024; Förster et al., 2019; Brulle & Norgaard, 2019; Mälkki & Green, 2014; Verplanken et al., 2020; Vuori & Huy, 2016)	(4) System(s) awareness and memory (8) Reflexivity and social learning
b) Sense of relatedness and collective responsibility	Feeling connected/attached to other people, to social groups, or to nature, compassion, empathy, sympathy, solidarity, trust, feeling safe in social interactions, feeling safe to share emotions, positive mood, awe, love, joy, generosity, gratitude, feeling accepted, self-reflection, guilt (Feola & Jaworska, 2019; Grimwood et al., 2015; Grund et al., 2023; Lloyd et al., 2015; Marks et al., 2022; Martiskainen & Sovacool, 2021; Ojala, 2017; Pereira et al., 2019; Pisters et al., 2020; Rank & Frese, 2008; Ulusoy, 2016)	Shame, isolation, feeling excluded, sense of detachment, alienation, missing trust, withdrawal, self-pity, rejection of responsibility, blaming others, aggression, cruelty, submission, pride, gathering groups of like-minded people to prevent unpleasant thoughts and emotions, anxiety, avarice, greed, miserliness, envy, jealousy, hate, self-centeredness (Bogner et al., 2024; Dzalbe et al., 2024; Hart, 2026; Martiskainen & Sovacool, 2021; Rank & Frese, 2008; Vuori & Huy, 2016)	(1) Inclusive and multi form governance (3) Empowered and autonomous communities of practice

c) Building visions of alternative futures and realigning values	(Constructive) hope, optimism, trust, empathizing with different perspectives, accepting problems, self-reflection, feeling safe in social interactions, safe spaces to discuss emotions, emotional discourses for meaning-making, opening up to alternative epistemologies, inspiring and motivating people, dealing actively and jointly with uncertainty, ambiguity, complexity, and worry, excitement, joy, desire (Brulle & Norgaard, 2019; Feola & Jaworska, 2019; Martiskainen & Sovacool, 2021; Marks et al., 2022; Ojala, 2017; Pereira et al., 2018; Rank & Frese, 2008)	(Unrealistic) hope (leading to de-emphasizing or denying the seriousness of problems, less engagement, preserving the status quo, escaping from difficulties), hopelessness, fear, pain, resistance, distancing, distracting, pessimism, ruminating, cynicism, fatalism, reacting to uncertainties with sadness, worry, stress, anger, frustration (Marks et al., 2022; Martiskainen & Sovacool, 2021; Ojala, 2017; Rank & Frese, 2008)	(5) Sustainability foresight (8) Reflexivity and social learning
d) Acting differently and innovating	Self-efficacy, curiosity, surprise, desire, excitement, fun, joy, positive mood, confidence, pride (in specific action or behavior), being open to critical reflection, compassion, trust, respect, hope, seeing others succeed, action to channel pain, negative moods indicating deficient status, tension, dissatisfaction, distress, discomfort, guilt (as a trigger to fix a situation), fear (as a trigger to courageous actions)	Fear, anxiety, threat, guilt, discouragement, hopelessness, powerlessness, shame, negative mood, (permanent) stress, being closed to critical reflection, pride (in global self, hubris), fatigue, (unrealistic) hope (without action tendency), gratitude (Bogner et al., 2024; Martiskainen & Sovacool, 2021; Ojala, 2017; Rank & Frese, 2008; Vuori & Huy, 2016)	2) Transformative leadership 6) Community-based experimentation with disruptive solutions 7) Innovation embedding and decoupling

Note. The table displays emotions in a dualistic (enabling—constraining) space. This comprises only an indicative picture and should be understood as non-deterministic, that is, these emotions and emotional states create conditions for human agency, not determine it. In addition, the same emotion can relate to transformative capacity in multiple ways, and we might not be able to dualistically separate specific enabling and constraining emotions.

Our mapping in Table 1 documents the various links between emotions and transformative capacity. All four areas are inevitably closely interwoven with different emotional states, which can be both enabling and constraining for transformative capacity, as we illustrate with a few examples:

For instance, learning research suggests that emotions are crucial for a) recognizing problems and the need for change. Novel experiences that challenge one's own certainties can evoke feelings of irritation, confusion, doubt, or guilt, which are important triggers for this initial learning phase (Grund et al., 2023). On the other hand, stronger negatively perceived emotional states, such as panic or depression, can halt such learning by inhibiting cognitive critical reflection and creative thinking (Förster et al., 2019).

We further find that emotions such as acceptance, joy, and love can enable a sense of b) relatedness and collective responsibility, while emotions such as shame and isolation tend to constrain collective responsibility. Empirical cases of social innovation, such as agri-food initiatives, document how the joy of gardening or the feeling of being accepted within a group creates collective responsibility and the conditions for human agency and transformative capacity (e.g., Feola & Jaworska, 2019; Pisters et al., 2020; Simoens et al., 2025).

We also find that emotions such as hope can enable and are associated with the c) building of visions of alternative futures, while implausible hope or fear can restrict the building of such visions (Marks et al., 2023; Ojala, 2017). For example, the increasingly imagined loss associated with sustainability transformations (related to subjectively valued aspects such as social status or materiality) is associated with emotions such as grievance and fear and constrains the building of alternative visions (e.g., Bogner et al.,

2024; Dzalbe et al., 2024). This can be seen in the socio-political negotiations around the phase-out of the combustion engine in Europe, which channel questions about the decline of the automobile industry, the loss of jobs, and social identity, thereby impeding the building of alternative visions and value alignment.

Self-efficacy, excitement, and confidence can be valuable companions for d) acting differently, experimenting, and innovating, and thus finding the courage to take risks and break new ground; for example, disruptive and path-breaking innovation (Ojala, 2017; Rank & Frese, 2008). Feelings of powerlessness or self-doubt, on the other hand, can hinder and thwart experimentation and innovation (Bogner et al., 2024; Ojala, 2017). These examples also point to the strong social embeddedness of emotions. Although powerlessness is embodied individually, it can also be closely linked to social institutions, collective sentiments, and physical infrastructures, such as a lack of public spaces for active participation or a contagious social atmosphere of hopelessness.

In addition to these brief empirical insights on the roles of emotion in relation to transformative capacity, we derive four additional and overarching key insights from our mapping:

1. *Emotions are an essential and integral part of transformative capacities*: Transformative change is strongly accompanied by emotions that move both initiators and opponents of transformations and innovations (Bogner et al., 2024; Rank & Frese, 2008). These emotional states are closely linked to the individual and collective capabilities and (in) abilities to recognize and identify problems, cope with uncertain futures, and experience agency to initiate change. Thus, we argue that emotions condition transformative capacities in non-deterministic ways.
2. *Different phases of transformation processes are associated with different emotions, which can both enhance or hinder transformative capacities*: While irritation, confusion, or doubt are important triggers for initial problem perceptions and, thus, for learning (Förster et al., 2019; Mälkki & Green, 2014), more pleasant emotions like trust or compassion are important pillars for the sense of relatedness to others as an important basis for communities of practice, joint experimentation, and collective responsibility (Lloyd et al., 2015; Ulusoy, 2016). Sometimes certain emotional states, such as grieving a loss, can be an obstacle to change in the moment, but in the long run, they are inevitable to get through the "valley of tears" and to open up to new perspectives (Bogner et al., 2024, p. 4).
3. *Emotions do not have a unidirectional, monocausal effect on transformative processes but are interwoven and interact closely with cognitive and action-oriented components:* Accordingly, individual discrete emotions cannot be understood as simple tools or static elements that create transformative capacities (Bogner et al., 2024; Chapman, 2017). Rather, the same emotional state can have contradictory implications in transformations. For example, hope can be seen both as a driver for a constructive reflection on alternative futures and as a means of escaping difficulties or creating unrealistic optimism, leading to less engagement[2] (Marks et al., 2022; Ojala, 2017; Rank & Frese, 2008). While (slight) stress is often seen as a prerequisite for problem recognition and innovation, stronger forms of stress or anxiety can lead to persistence, denial, resistance, or even trauma (Brulle & Norgaard, 2019; Förster et al., 2019; Mälkki & Green, 2014). Thus, the response to emotions is not determined or fixed, but depends, for example, on the strength of the emotion or the individual or collective (in)ability to constructively respond to emotional states[3] in a given situation. Moreover, the relationship between emotions and transformative capacities is not unidirectional but mutually intertwined. Emotions also result from transformative actions or failures. For example, successful innovations can boost self-confidence and satisfaction, while emerging adversities or backlashes can trigger frustration and disillusionment, which in turn can affect transformative capacities.
4. *Emotions are individually embodied but are contagious, socially conditioned, and political*: Although individual skills for the targeted use or processing of emotions, for example, in the form of emotional intelligence for transformative leadership, are discussed (Boyatzis & Soler, 2012; Rank & Frese, 2008), they are collectively embedded; and only collectively shared emotions develop a dynamic that can affect societal transformative change, making them a relevant dimension of political contestation (Ahmed, 2014; Bogner et al., 2024; Hart, 2026).

Conclusion

In this article, we have argued that emotions are an important and often neglected dimension of social (climate) resilience. By focusing on the role of emotions in the realm of transformative capacities, we complement the literature on emotional responses to environmental and climate change (e.g., in the form of loss), and existing frameworks on transformative capacities (e.g., Keck & Sakdapolrak, 2013; Wolfram, 2016). We show that emotions are an integral part of understanding transformative capacities, particularly for problem recognition, shared responsibility, reorientation, and collective action. However, the role of emotions in these four domains is ambivalent, not unidirectional, and they not only accompany and influence change processes but also actively promote and hinder them. This calls for future research to better understand the understudied role of emotions, not only in response to change processes, such as "transition pain" (Bogner et al., 2024, p. 1) but also as an influence on building capacities for change, that is, how they condition human agency. Thus, a better understanding is needed of how emotions interact with cultural-cognitive and action-oriented components in the complex interplay of shaping change and social resilience. New approaches are also needed to make emotions tangible and accessible. Emotions operate predominantly in the unconscious, both individually and collectively. We argue that consciously engaging with emotions in change processes, making them accessible, and recognizing the underlying mechanisms, significantly strengthens transformative capacities (both individually and collectively). However, it also raises open questions about the ethics of research in emotionally charged situations.

Considering emotions broadens the perspectives on transformative capacities, but they should not be seen as a simple lever to better steer transformations. This is not only ethically questionable (Chapman, 2017) but can also lead to emotionally charged conflicts and camp fights (e.g., visible in the targeted use and exploitation of emotions by right-wing populists, etc., see e.g., Ahmed, 2014).

Emotions in transformation processes are not (only) individually embodied, but are socially embedded and conditioned, and therefore need to be dealt with collectively. Emotions are a constant presence in people's lives, especially in times of change and restructuring. In this article, we emphasize the importance of acknowledging emotions in these processes. Neglecting them in research deprives us of a deeper understanding of how individuals experience and adapt to significant change. Moreover, emotions often reflect attitudes, which in turn influence actions. Thus, major transformations not only reshape physical landscapes but also affect emotional spaces, influencing how individuals perceive and interact with their surroundings. Ultimately, emotions are intricately intertwined with our interactions with objects and spaces. They provide insight into individuals' attachments, preferences, and the importance of certain practices, networks, and habits in shaping their identities and livelihoods. Understanding these emotional connections provides valuable insight into the importance of preserving these aspects. Such an approach is more responsive to the needs, values, and beliefs of communities, rather than making assumptions about what is best for them from a distance.

However, emotions are not only personal experiences; they are also shaped by political decisions. In the context of politically orchestrated transformations, emotions thus become sites of collective struggle, reflecting broader social and political tensions rather than just individual feelings. We therefore suggest that emotions need to be taken seriously in social negotiation processes (compassion), that policymakers need to be aware of the possible impact of emotions in the (governance of) decision-making processes (e.g., anticipating resistance), and that there is a need to actively create frameworks for navigating emotions in transformations. Safe spaces in change processes can offer ways to take these aspects seriously. They could allow for the sharing of emotions (e.g., reducing shame, guilt, feelings of threat and insecurity; building mutual trust, security, and empathy), promote dialogue in heterogeneous groups to combine different perspectives and realities of life (avoiding othering, empathizing with other points of view), and create a shared learning environment for learning emotional intelligence, emotional literacy, or access to emotional awareness to deal with aspects, such as insecurities, anger, dissatisfaction, fears, and translate them more constructively into action and agency. In this way, they can promote just and caring environments in transformative change.

Notes

[1] Note that we speak of capacity (singular) when referring to Wolfram's (2016) concept, while we use capacities (plural) when referring to the broader discourse on transformative capacities and social resilience.

[2] Ojala views hope as consisting of cognitive, emotional, and action components, which illustrates the complex interplay of emotional states, normative goals, and actual social behavior (Ojala, 2017, p. 77–78).

[3] This can be a person's status that shapes how one perceives and deals with threats (Vuori & Huy, 2016), the emotional competences of leaders to utilize emotions for innovations in a targeted manner (Boyatzis & Soler, 2012; Rank and Frese 2008) or social fabric and collective (in) abilities to cope with transition pain (Bogner et al., 2024), cultural trauma (Brulle & Norgaard, 2019), or uncertain risks (Hart, 2026).

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