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Exploring resilience capacities with food innovators: a narrative approach

Megan Lindow[1], Rika Preiser[1] and Reinette Biggs[1,2]

[1]Centre for Complex Systems in Transition, Stellenbosch University, Stellenbosch, South Africa and [2]Stockholm Resilience Centre, Stockholm University, Stockholm, Sweden

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Author for correspondence: Megan Lindow, E-mail: megan.lindow@gmail.com

Non-technical summary

We interviewed grassroots food innovators in South Africa to explore the diverse ways in which their narratives expressed different capacities for resilience, such as dealing with surprise and shaping desirable change. We drew on key resilience themes of rootedness, resourcefulness and resistance (the 3Rs) as lenses through which to view their personal stories and efforts to build resilience and reshape the future. We used narrative and interpretative methods to connect the personal and context-specific experiences of food innovators to the 3Rs, exploring a new approach to uncovering resilience capacities. We suggest that this approach could be usefully employed to understand potential resilience capacities that could help address diverse sustainability challenges around the world.

Technical summary

As direct accounts of human experience, narratives offer a way of exploring the subjective and contextual dimensions of different capacities that influence resilience – the capacity to deal with surprise and unexpected change. In this study, we analysed the stories of food innovators in South Africa through combined narrative and interpretative methods, and we developed a novel approach to tease out some of the unique and particular aspects of resilience expressed in their stories. Using a combination of narrative enquiry and interpretative phenomenological analysis, we drew on the key resilience themes of rootedness, resourcefulness and resistance (the 3Rs) as lenses through which to view the personal reflections of food innovators and to identify important capacities that may contribute towards their efforts to build resilience and reshape the future. Amongst the diverse set of narratives, we found that resilience capacities were strongly influenced by an ethos of connectedness and care; attunement to co-creative processes; and experimenting with novelty and diverse narratives. We suggest that this narrative-based methodology could be usefully employed to surface latent rich and multidimensional resilience capacities in relation to various sustainability challenges in diverse contexts around the world.

Social media summary

A narrative approach to explore resilience capacities that can help reshape the future of South African food innovators.

1. Introduction

Human activities are having a profound and pervasive effect on ecologies and societies around the world, posing particular challenges in the food system. The production, distribution and consumption of food has become highly globalized and industrialized, and is significantly implicated in discussions related to climate change, biodiversity loss, poverty and inequality and malnutrition-related poor health, affecting one of every three people (Gordon *et al.*, 2017). In this paper, we look to the roles of 'food innovators' in the Western Cape, South Africa, analysing their stories and reflections on their lived experiences in an effort to learn more about the capacities they draw upon to shape new possibilities in the food system. We do this using a combination of narrative and interpretative methods, through which we surface and explore the different resilience capacities underlying individual, grassroots efforts to shape change within the local context of the Western Cape, South Africa. We suggest that this approach could be usefully applied to a variety of global sustainability challenges across diverse contexts.

The food system of the Western Cape can be understood as a complex system in deep, protracted social and ecological crisis, reflecting the particular dynamics and vulnerabilities of its unique geography and historical legacies, as well as of its position in a contemporary globalized world (Brown, 2016; Moore, 2016). As a biodiversity hotspot under threat, and also home to a

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diverse cultural mixture of indigenous, African, Asian and European heritages, the Cape's historical legacies of colonization, slavery and apartheid continue to influence current food system dynamics in a multitude of ways, such as determining who has access to healthy, affordable food. High levels of childhood malnutrition and stunting due to chronic poverty and food insecurity, as well as the marginalization of emerging black farmers within a dominant mode of non-indigenous, monoculture crop production, are particular features of this local food landscape (Pereira & Drimie, 2016).

These local dynamics are also embedded in and shaped by larger global forces, reflecting the heightened global interconnectivity of the food system over the past 50 years (Gordon *et al.*, 2017). Trends such as the proliferation of cheap, processed foods in poor and urban areas, the concentration of corporate ownership of food, the commodification of seeds and environmental destruction from farming are influenced by global markets focused on the cheap production and distribution of food (IPES-Food, 2016). In South Africa, as in other parts of the world, local and national dynamics are heavily entrained in such global dynamics and forces.

We focus on food in this paper because of its prominent influence on the social-ecological relationships that shape our world (Gordon *et al.*, 2017). Social-ecological resilience is a complexity-based approach to understanding the profound interdependencies and interconnectivities among people and natural ecosystems, across multiple spatial and temporal scales (Folke *et al.*, 2016; Olsson & Galaz, 2012; Preiser *et al.*, 2018). Resilience is an emergent property of social-ecological systems, reflecting the capacity to adapt or transform in the face of uncertainty and change, particularly unexpected change, in ways that support human well-being, in its multiple dimensions (Biggs *et al.*, 2015; Chapin *et al.*, 2010, Folke *et al.*, 2016). The challenges of the food system require not just adaptation measures to deal with issues such as climate change and poverty, but also deeper structural transformations. Yet there is no clear path to guide how transformation towards more desirable food systems can be achieved, or even defined. Experimenting with different approaches to transformation is therefore important. In the words of the poet Antonio Machado: 'Traveler, there is no road/You make your own path as you walk' (translation from Spanish).

Forging new pathways into the unknown is an important role played by social innovators (also called leaders or institutional entrepreneurs). These individuals are often central to articulating new perspectives and value systems that can open up possibilities for broader systemic change (Moore *et al.*, 2014; Olsson *et al.*, 2006; Westley *et al.*, 2013). Adapting the Biggs *et al.* (2010) definition of a social innovator, we describe a food innovator as a person working to change the food system through 'introducing new strategies, concepts and processes that disrupt or enable novelty to emerge'. These innovators often work to achieve this by forging new relationships and collaborations, developing new approaches and methods, raising awareness, fostering connections to local places and providing support to new initiatives (Biggs *et al.*, 2010; Olsson *et al.*, 2006). Through this work, they can help build resilience by facilitating and enabling adaptation to change and, in particular, exploring novel approaches that can be employed to realize deeper transformational change.

A range of resilience literature is concerned with understanding how the capacity for resilience, in its different aspects of adaptability and transformability, is developed and exercised (Brown & Westaway, 2011; Folke *et al.*, 2016; Walker, 2004). The presence or lack of resilience in a system depends on how various 'resilience capacities' combine in a given context. Biggs *et al.* (2012, 2015), for example, identify seven principles that have the potential to contribute towards resilience. These attributes do not build resilience in and of themselves, but rather are important features of complex systems that may contribute to the emergence of resilience (Biggs *et al.*, 2015). Berkes and Ross (2013) identify numerous qualities that may influence 'community resilience' – stemming from the principles of agency and the capacity for self-organization, and including social networks, values, beliefs, knowledge and skills, learning, infrastructure, economy, leadership, governance and people–place relationships. Brown (2016), meanwhile, informed by a political ecology lens, conceptualizes resilience as a phenomenon that is highly contextual, dynamic, process-orientated and contingent – arising from various complex interactions among strengths and vulnerabilities, power asymmetries, cultures, governance structures, social hierarchies, ecological and temporal relationships and other dynamics of a particular community or place.

Many of the qualities that influence the capacity for resilience are hard to pin down, reflecting, for example, the values, relationships, beliefs, cultures, perspectives and perceptions of people (Bennet *et al.*, 2016; Brown, 2016; Kurtz, 2014). Sharing stories is one way of making such intangible qualities and attributes more explicit (Kurtz, 2014). Most people naturally tend towards telling stories as a way of sharing their experiences and making sense of them (Clandinin, 2007; Kurtz, 2014). A wide range of literature suggests that stories have particular cognitive and social attributes that make them an extraordinarily diverse, flexible and available medium for people to share their values, beliefs, feelings and perspectives with others (Clandinin, 2007; Ingram *et al.*, 2015; Kurtz, 2014; Lejano *et al.*, 2013; Miller & Solin, 2015).

We wanted to harness this rich potential of story to see if it could help us uncover the kinds of resilience capacities that different food innovators are drawing on as they create, innovate and experiment to bring about transformation in complex systems facing multiple, profound challenges (Biggs *et al.*, 2010). We were particularly interested in using narrative methods to explore the significance of food innovators' values, beliefs, motivations and emotional connections that might underpin the approach to their work in food systems and their engagement with broader issues relating to food such as ecology, community, social justice and well-being. We used a novel combination of methods to help us uncover resilience capacities and identify on-the-ground examples of what these capacities look like in the specific context of individual food innovators pursuing transformation in the Western Cape, South Africa. Although our study focuses on this specific local context, the method we developed could be applied to gain understanding of the resilience capacities at play in confronting diverse sustainability challenges in varied contexts around the world.

2. A combined narrative and interpretative approach to exploring resilience capacities

We explored the stories of food innovators in the Western Cape using a combination of a narrative and an interpretative phenomenological analysis (IPA) approach. Our combined use of these qualitative methods – both of them flexible and diverse in their applications, with a wide scope for adaptation to fit specific research objectives (Davidsen, 2013) – enabled us to tailor our approach. The narrative aspect allowed us to elicit and explore

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the specific context and motivations surrounding each innovator's work in rich detail through the story form. Through the IPA, we were then guided in a systematic way to render interpretations of the food innovators' stories, which enabled us to connect their personal experiences explicitly to resilience concepts.

Our study comes alongside numerous other recent and ongoing efforts to develop ways of assessing resilience, using both quantitative and qualitative methods – or combinations of both – particularly as resilience ideas have prominently taken hold in international development and climate-related and humanitarian interventions, policies and discourses (Brown, 2016). Many of these efforts have focused on measuring or 'pinning down' resilience, such as through the development of specific indicators to measure resilience outcomes (Brown, 2016; Quinlan *et al.*, 2015; Van der Merwe *et al.*, 2018). Our approach differs in that it seeks not to measure resilience, but to learn more about the complex processes of resilience as an art of building capacities, as seen through the experiences and perspectives of individuals imaginatively immersed at the margins of food systems.

2.1. Identification of interviewees

The food innovators we interviewed were identified through the Seeds of the Good Anthropocene[i] project, which studies the potential of small-scale, nascent projects around the world to contribute towards broader systemic social-ecological transformations (Bennett *et al.*, 2016; Pereira *et al.*, 2018). We chose participants who could be identified as playing the role of a food innovator and who did not represent any particular institution, but rather were acting on their own personal initiative, positioning themselves in fluid spaces, including social movements and informal collaborative networks, in order to innovate and operate with relative freedom from constraints of routine, bureaucracy, mandate and established practices (Lejano *et al.*, 2013). Although innovators also exist and play critical roles within larger, established organizations, they typically employ different strategies and approaches from people working independently, and they may have different motivations and worldviews.

We selected the following five participants for this study:

Participant 1: A seed systems and indigenous food activist who coordinates the Slow Food Youth Network (SFYN) for southern Africa. Coming from a background of political organizing for land rights and unrestricted access to plant seeds in South Africa, she faced burnout from engaging in adversarial politics. After attending the Slow Food Terra Madre exposition in Italy in 2012, she was inspired by the abundance and variety of indigenous food traditions from around the world featured there. She developed a new vision focused on inculcating creativity, spirituality, self-empowerment and comradeship into a new SFYN chapter for southern Africa. Her approach focuses on the generative power of indigenous food and seed systems to develop community, knowledge and livelihood opportunities among marginalized youth facing high rates of unemployment and poverty.

Participant 2: A founding member of Tyisa Nabanye, an informal permaculture farm located at ERF 81, an underutilized plot of land in Cape Town's central city area owned by the South African Military. The group began farming at ERF 81 in 2013 and developed a strong, creative local community initiative, hosting events such as a popular Sunday market. Trained as a performing artist and also involved in the SFYN, the participant integrates food activism and artistic creativity in her work, drawing inspiration from her grandmother's stories of long-lost ways of life in a rural Xhosa village and her own knowledge of permaculture principles. This inspiration feeds into her performing arts pieces, and also into her work on developing school gardens around the Western Cape through the non-governmental organization Surplus Peoples Project.

Participant 3: A wild food innovator who is pioneering small-scale cultivation of edible indigenous plants who is working to introduce these into the local food culture and economy and thereby contribute to a climate-resilient future in the Western Cape. An avid forager, she has experimented to recover knowledge of wild edible plants in the Cape and to engage in an ethical way with communities whose custodianship of these natural resources has been undermined through centuries of colonization. As in many other parts of the world, virtually all commercially grown crops in South Africa are non-native species. Realizing that foraging of wild plants often found within shrinking habitats and densely populated areas would not be sustainable, however, she shifted her focus towards working on the cultivation of wild edible plant species as food crops. She engages widely with farmers, chefs, entrepreneurs, businesses and academics to advocate for the appreciation and uptake of these wild edible plant species in the local food system.

Participant 4: A farmer–activist who is developing a model of small-scale agro-ecological farming in the Philippi Horticultural Area (PHA), a farming area within Cape Town's urban periphery that supplies much of the city's fresh produce and plays an important and unique role in securing access to healthy food amongst the urban poor (Battersby-Lennard & Haysom, 2012). The participant has led a campaign to preserve the area against proposed new housing and sand mining developments, arguing for recognition of the PHA as a vital resource for the city's food security and future resilience to climate change. The campaign also promotes awareness of a natural underground aquifer that makes year-round crop production possible in an increasingly water-stressed urban metropole, but needs to be safeguarded in a context of acute, market-driven urban development pressures.

Participant 5: A chef based in the small west coast fishing village of Paternoster, exploring hyper-local indigenous food as a way of connecting people to the local ecology, landscape and seasonal rhythms of a place. This participant's creative process is based on the discovery of the unique colours, flavours, smells and textures of diverse local species belonging to the critically endangered strandveld fynbos ecosystem, as well as local seaweed and shellfish species. The participant explores and observes this unique landscape and renders layered interpretations of the local flora and fauna in his menus, challenging diners to experience novelty and encounter the natural world both visually on the plate and through their palates.

2.2. Intuitive interviewing with food innovators

In-depth interviews were conducted individually with each of the food innovators over a 9-month period (July 2016–March 2017) to elicit their own personal stories, as well as the stories of their respective projects. Each participant was interviewed at least twice, and all of the interviews were recorded using the voice recorder feature on a mobile phone. During at least one of these interviews, we introduced an experiential dimension, such as by asking the participant to choose a place that is significant to their sense of connection with food and conducting the interview as we explored that place. The interviews were guided by the

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following lines of questioning (see Supplementary Appendix A for a full list of questions):

(1) What makes this person an activist or trailblazer in the food system? What are the values, beliefs, experiences and emotional connections that shape their particular approach?
(2) How are they responding to social-ecological challenges through the stories they are living, telling and bringing to life through their activism?
(3) How are they responding to the particular challenges and characteristics of the local food system? Are there ways in which a local context frames a particular food story?

In conducting our interviews, we drew on narrative enquiry as a method concerned with the particularities of lived experience and that understands a person as being enmeshed in multiple layers of stories through which a sense of self is continuously emerging (Clandinin, 2007, p. 41). Foremost in these exchanges, we considered the ethics of appreciative, thoughtful and intuitive listening to be an entry to seeing the world from the participant's perspective and faithfully capturing their stories (Smith *et al.*, 2009). We often departed from our fixed set of interview questions as we walked together in the landscape with the participant and talked, allowing questions and reflections to arise in response to the participant's sensibilities. We allowed the interviews to flow intuitively, trying to get to the heart of the worldview, values and motivations underpinning the participant's approach to their work.

Place gave shape to many of the interviews and often served as an entryway into the person's world. For example, during our interview with the farmer–activist (P4), the participant narrated his story while showing us the different places within the PHA. One interview with the wild food innovator (P3) took place along Kommetjie beach, where she had developed much of her early knowledge of foraging in the landscape. Another, with the chef (P5), took place in the coastal nature reserve that he visits for regular inspiration in developing his seasonal menus. Particularly because food innovators had such strong attachments to the natural world, and sometimes to a particular place, we found that visiting these significant places with them prompted stories to flow and brought a greater sense of immediacy to the encounters. We found that these interactions in place enhanced the quality of their stories and enabled us as interviewers to deepen our own appreciation of their particular perspectives (Clandinin, 2007).

During each of these interviews, we gathered personal stories, experiences and reflections, and then later produced full transcripts of the encounters. We also separately produced a long-form narrative of each encounter, providing a rich portrait of the person and describing our interactions with them in detail, exploring the layers of relationship, meaning and interpretation in their stories through producing a text (Clandinin, 2007).[ii]

2.3. Interpretative phenomenological analysis

As our research progressed, we found that narrative enquiry alone, with its emphasis on discovering meaning through the narrative form, was limited in its ability to produce more general insights regarding underlying resilience capacities that the different innovators potentially held in common (Clandinin, 2007). Given the highly subjective and contextual nature of resilience capacities, we sought a more systematic and structured method of unearthing them within the stories we had gathered.

We turned to IPA, a method that is commonly used in various health and psychology fields, but as far as we know has not been applied in resilience studies. Adding the IPA method on top of the narrative enquiry provided us with a framework to dive more deeply into the food innovators' stories, to produce detailed interpretations of the meanings in each story and then to connect these insights to resilience concepts in a robust and rigorous way.

The IPA method combines aspects of phenomenology (a philosophical discipline concerned with the study of experience), hermeneutics (the study of interpretation) and idiography (the study of the particular). The approach seeks to explore personal lived experience as fully as possible 'on its own terms', from an intuitive, open and inductive standpoint (Davidsen, 2013; Smith & Osborn, 2015). In an IPA framework, analysis is regarded as a process of interpretation, reflecting the view that people are 'sense-making organisms' (Davidsen, 2013; Smith & Osborn, 2015). The researcher seeks both to understand the subjective experiences of participants and to interpret the broader context of their experiences (Davidsen, 2013). Thus, an IPA study employs a 'double hermeneutic' in which 'the researcher is trying to make sense of the participant trying to make sense of what is happening to them' (Smith *et al.*, 2009, pp. 3–11).

IPA offers a step-by-step process for analysing conversations between a participant and a researcher that reflect on the participant's life experiences in relation to a given topic. An IPA study is typically conducted with a small number of six or fewer individuals, following a set of prescribed steps that are outlined in Appendix B (Smith *et al.*, 2009). Steps 1–4 had been covered through the narrative-based interview process, and we then turned to steps 5–9 for further analysis.

Interpretation works at two levels: first through a sensitively conducted and highly attuned encounter between the researcher and the participant, during which the participant describes their experiences and draws meaning from them (Smith & Osborn, 2015; Smith *et al.*, 2009). The second layer of interpretation then happens through the researcher's methodical analysis of the participant's reflections. The idiographic aspect of IPA ensures that each participant's case is engaged individually in painstaking detail, before the researcher proceeds to making more generalized claims derived from across the participant group as a whole (Smith & Osborn, 2015; Smith *et al.*, 2009). The rigorous and meticulous process of interpretation ensures meaning remains grounded in participants' direct experiences (Smith & Osborn, 2015).

After reading all of the interview transcripts to absorb them as a whole, we worked line by line through each one, highlighting words, phrases or passages that struck us as significant. We then numbered each of these highlighted passages in sequential order and worked our way through the transcript once more, this time commenting on each highlighted passage and recording our own responses as to why the comment seemed significant, as well as the important themes, concepts and emotions that we felt were reflected. For each interview transcript, we generated somewhere between 35 and 100 different exploratory comments. Through this exploratory commenting, we began to develop a sense of being in dialogue not only with each particular interview, but also in an expanded dialogue across all of the interviews (Smith *et al.*, 2009).

Next, we worked through the lists of exploratory comments generated from each interview and captured the overall theme

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reflected in each comment in just a few words. The emergent themes were likewise numbered according to the exploratory comment they derived from. This step of producing emergent themes from the exploratory comments increased the level of abstraction, as we moved from commenting on the direct experiences and reflections of participants towards developing more generalized themes and ideas (Smith *et al.*, 2009). Appendix C provides an example of the steps that we followed to produce exploratory comments and emergent themes, taken from P2's interview transcript. Appendix D provides a comprehensive list of the emergent themes we derived from the exploratory comments that we made on the interview transcripts of each food innovator (which are too voluminous to include here). Appendix E provides a table illustrating how we clustered the emergent themes into broader categories reflecting different capacities for resilience.

Navigating the ethics of interpretation was very important in the process. Moving through the different phases of interpretation, we were guided by a sense of respect for and responsibility to the person and an awareness of the power dynamics of interpreting another person's story. At several different stages in the process, we shared our findings with participants and invited their feedback. We asked participants to review, and comment on, completed versions of their respective interview transcripts, the stories we prepared about our encounters with them and the interpretations we generated through the IPA process.

2.4. Working with the hermeneutic circle to reach the 3Rs

Throughout this process, we used the conceptual approach of the hermeneutic circle to develop linkages between the particular experiences of food innovators and more abstract resilience themes through which these stories connect (Smith *et al.*, 2009). To do this, we continuously shifted our perspective back and forth between focusing on the particular details of an individual's story or their specific way of perceiving an event as we worked line by line through the interview transcripts, developing an emerging sense of the entire collection of interviews as a whole. It was a continuous process of focusing on the parts to understand the whole, and on the whole to understand the parts (Smith *et al.*, 2009, pp. 28–29). As we had framed our interview questions specifically to elicit stories and reflections that would hold relevance to resilience ideas, we found that the process of working towards higher levels of abstraction through the hermeneutic circle naturally led us to consider ideas in resilience theory in relation to various passages within the interview transcripts.

As our explorations of the connections between our IPA themes and more abstract resilience concepts progressed, we began to recognize particular congruences with the ideas of resistance, rootedness and resourcefulness (the 3Rs) (Brown, 2016). The 3Rs are proposed by Brown (2016) as multi-dimensional and complementary frames for analysing the capacities that contribute to resilience and exploring what those mean in a particular context. They are conceptualized as follows:

- Rootedness: '[A]cknowledges the situated nature of resilience, and the importance of culture and place – not only as physical environment and context, but also as identity and attachment'.
- Resourcefulness: '[C]onsiders the resources available, and how they can be accessed and used in response to change'. Resources include 'capacities, knowledges, innovation and learning'.
- Resistance: '[P]uts politics and power at the heart of resilience. It concerns how new spaces for change can be opened up and how positive transformation might be shaped and mobilised' (Brown, 2016, pp. 3–4).

For the sake of thoroughness, we also compared how Brown's material fit with our IPA themes against other resilience thinking frameworks, most notably the seven principles of resilience (Biggs *et al.*, 2015). We found that our themes resonated fairly well with five out of the seven principles of resilience, encompassing ideas of diversity, connectivity, attunement to complexity thinking, learning and experimentation and broadening participation (Biggs *et al.*, 2015). Overall, however, we found that our themes had stronger resonance with the 3Rs, and we proceeded to use this framework in our interpretation.

The 3Rs offer a broad conceptual approach to analysing highly contextual, subjective and value-laden resilience capacities, inviting further exploration of what these capacities might look like in particular circumstances (Brown, 2016). Through the 3Rs, resilience is conceptualized holistically in terms of people's everyday lived experiences: in how they shape strategies, exercise agency, learn, respond and adapt to their situations, innovate, find creative solutions and employ their knowledge and resources towards 'living well' and making the changes they desire (Brown, 2016, pp. 193–199).

We found the 3Rs to be particularly useful as analytical frames to explore resilience capacities at the local scale. Because the frames were wide and encompassing, we found that the uniqueness of each discrete story could be fully preserved in its own particular context, yet at the same time robust and meaningful connections could be drawn to different dimensions of resilience held within the overarching framework of the 3Rs.

3. Resilience capacities in food innovators' stories

Amongst the food innovators we interviewed, we observed that each person's particular form of engagement with food had been shaped through the unfolding of their own unique context, including their personal and family experiences, their particular experiences and perceptions within the socio-cultural fabric of the Western Cape and the development of their particular perspective on broader global social-ecological concerns of the food system (Lejano *et al.*, 2017).

Explaining the motivations behind their projects, for example, participants related painful family histories of land dispossession and celebrated their ancestral and familial traditions of close connections to the land. They evoked the complex social and ecological heritages of the region, with its deep colonial and apartheid-era legacies of racial oppression, manifesting in the present food system through the loss of indigenous seeds, knowledge and biodiversity, for example, as well as through the challenges of accessing healthy, affordable food in poor communities. They linked these personal and local experiences to global discourses around themes such as resilience to climate change, promoting food and seed sovereignty, celebrating diverse cultural heritages of food and addressing the social and ecological challenges of food.

Working with the hermeneutic circle, we condensed and connected these rich individual experiences and reflections and identified ways in which we saw them reflecting broader resilience capacities in relation to the 3Rs. Table 1 contains the different resilience capacities we identified in food innovators' stories,

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Table 1. The resilience capacities we identified in relation to the 3Rs (see Appendices D and E for cross-references to the related emergent themes we identified in the food innovators' narratives).

Rootedness	Resourcefulness	Resistance
(1) Connection to people, place, ecology (2) Shifting values, perceptions, awareness (3) Heritage and intergenerational themes (4) Responsibility to the land (5) Appreciation of diversity	(1) Self-reliance (2) Diversity of thought, perception, function, approach (3) Participation and collaboration (4) Inclusivity (5) Building social capital (6) Accessing resources (7) Learning (including from nature) (8) Innovation (9) Intuition, creative process (10) Adaptation, cultural change	(1) Food and land injustices (2) Experimenting with dietary diversity (3) Artistry and creativity (4) Challenging entrenched mind-sets, practices (5) Self-reliance (6) Resisting exploitation (7) Diversity of narratives (8) Strengthening participation

grouped under the headings of the 3Rs and based on the emergent themes detailed in Appendices D and E. In the following sections, we highlight some of the ways in which we observed food innovators employing resilience capacities in their personal approaches to grappling with complex food system challenges and experimenting with creating new possibilities for transformation.

3.1. Rootedness

As a multidimensional concept, encompassing culture and place, identity and attachment (Brown, 2016), rootedness provided a lens for exploring the rich and diverse relationships and connections that participants described as being important to their values and giving meaning to their work. Looking at the stories through the rootedness lens, we identified resilience capacities that related to heritage, perception, responsibility to the land, appreciation of diversity and reconnecting people and nature. Table 2 provides quotations from the food innovators' narratives that illustrate some of these resilience capacities related to rootedness.

We saw the passages in Table 2 as reflecting each participant's particular sense of rootedness, explaining the depth of their commitment and the emotional anchors enabling them to persevere and face challenges. Our interview with P2, for example, highlighted the uncertainty and fragility of her community, which had no secure claim to the land they occupied, and had in fact recently been served with an eviction notice. In this context of uncertainty, we observed that the participant seemed to draw strength both from her grandmother's stories and from her sense of connection to the empowering life principles of permaculture. She reflected that her grandmother's values came alive for her through her own experience of farming and community building, inspiring her to look for ways to continue building the community's vision, even if they lost the land.

Responsibility to the land was another powerful theme highlighted by the rootedness lens. Participants described the historical, familial, ecological and sensory connections fostering their emotional attachments to the land and the diverse life relationships being supported in the place (Bousquet *et al.*, 2016; Folke *et al.*, 2016). This was reflected, for example, in our encounter with P5. His comments while walking with us in the nearby coastal nature reserve suggested to us that a sense of intimate connection to this land was key to sustaining his vision and creative process, as a stark contrast to the monoculture wheat fields that dominate the local landscape. The participant's intimate sense of connection to the land through close observation and appreciation of its dynamic and continuously unfolding relationships struck us as an important resilience capacity because it allowed us to understand his work as claiming space for a dynamic and enlivened vision of what food can be within a vast 'desert' of monoculture crop production. P1 and P5 in particular both underscored the importance of connecting to the land and ecology through the different flavours, herbs, salts, clays and resins found there.

For P4, meanwhile, appreciation of heritage and responsibility to the land came across as key resilience capacities. The participant commented on the history of the PHA, as he described the challenges he faces in his attempts at growing a model of small-scale agro-ecological farming to support emerging black farmers on the PHA. He seemed to be drawing strength from the story of this particular piece of land and the hardships that people living here in the past had overcome. He also related that his own family had been forcibly removed from the PHA under the apartheid-era Group Areas Act when he was 6 years old. When asked what sustains his commitment to building the PHA now, the participant replied: 'It's a matter of justice, perhaps. A hyper sense of justice … It's so unjust, you just can't walk away from something like this. I can't anyway'.

In analysing rootedness and looking more deeply into the diverse – and diversely articulated – resilience capacities reflected in the food innovators' stories, we see important values unearthed that may underlie the food innovator's motivations to create and persevere. In seeing a richness of connections and relationships – including intergenerational and interspecies connections – as a fundamental part of food, for example, food innovators are able to conceptualize their interventions in food systems in ways that extend far beyond the food itself, and into the landscapes and communities that both shape and are affected by how and what kind of food is grown, who has access to it and how this may support or undermine the well-being of broader social-ecological communities. This helps us to understand the ethics that may guide the practical dimensions of their work.

3.2. Resourcefulness

Taking Brown's (2016) concept of resourcefulness as a lens for analysing how different resources may be accessed and used to drive and respond to change, we focus on understanding how different 'capacities, knowledges, innovation and learning' are harnessed as important resilience capacities in the stories of food innovators. We understand resourcefulness as the 'deft mobilisation of energy' (Westley *et al.*, 2013), involving key resilience capacities such as intuition and self-reliance, attunement and creativity, learning and innovation that were identified through the IPA analysis. Table 3 highlights some of the particular

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Table 2. Quotations illustrating resilience capacities related to rootedness in the food innovators' stories (see Table 1 for a full list of resilience capacities).

Participant/resilience capacities identified	Quotation from transcript
P1: Seed and indigenous food activist; coordinator of Slow Food Youth Network Southern Africa (Resilience capacities: connection to people, place, ecology; shifting values, perceptions, awareness; appreciation of heritage; appreciation of diversity)	'My mind was blown wide open … That was the first time I saw how much diversity we have in the world … and how much indigenous food people are eating, from seaweeds in Chile to different woods and fruits and leaves and berries in Belarus … When I went to [Terra Madre] in 2012, I was of the understanding that the world is screwed, that there were all these monocultures, the hegemony, the oligarchs and all this stuff … And then I got there and there was so much diversity, not just so much diversity, but *so much*: so many breeds and species of animal, in vastly different, really specific agro-ecological conditions, like the deep freezing highlands of Iceland, or the lowlands of Uganda … The survivorship that happens, the complete diversity and adaptation and resilience that exists. It was so inspiring to see that all of that was just around food … it was enough momentum to keep me driven for four years'. (82–83)
P2: Permaculture farmer and performing artist (Resilience capacities: connection to people, place, ecology; shifting values, perceptions, awareness; appreciation of heritage; appreciation of diversity)	'In my grandmother's stories, I have a picture of an ancient way of life: celebration and games, singing and rituals that were all part of people's daily exchanges in nature, living off the land, the harvest. Because I was born in the city, I was never exposed to living off the land, and getting water from the river and all of that. There were all these hilarious stories of their childhood, and all these songs, and you could just see the enthusiasm when she's telling these stories … Coming to the farm, it made me connect the dots … it made me conscious of how I want to design my life. I want to share these stories through theatre and show the importance … of having a place like the farm where people can get their hands dirty with the soil'.
P3: Local wild food innovator (Resilience capacities: connections to people, place ecology; responsibility to the land)	'Dune spinach is very pervasive, it's a real pioneer. This is part of my deep interest in wild foods: you find things that grow themselves and are less resource-intensive to grow, so that farming starts to become less destructive. I want to find different solutions to use the land, to grow crops that are endemic to places, and don't displace the endemic biodiversity … With this patch of dune spinach, I think of how I'm invested in a relationship with the land and how it supports me: that's a very deep connection, a deep responsibility to the land'.
P4: Farmer and activist fighting for the preservation of key urban food producing area (Resilience capacities: connection to people, place, ecology; appreciation for heritage; responsibility to the land)	'This area is very interesting. It started off in 1885 as a highly intensive food producing area. Before that, the Khoi and the San used this area for grazing. Because the city was growing, we needed more vegetables, this area was developed into a vegetable farming area. So that history of starting off small, those farmers, you know, were from Germany. They were promised paradise [laughs], they had a big problem! They washed away in winter and baked and blew away in summer with the south-easter. But they overcame the odds and developed a food production model which served the city and which served them well. Gradually they moved into a large-scale industrial setup and that's not working anymore for them either. So now we are carrying the new vision for how we want to see it in future again … and we're also starting off in a difficult position'.
P5: Chef capturing the unique flavours of a biodiverse, threatened hyperlocal ecology (Resilience capacities: connection to people, place, ecology; appreciation of diversity)	'I just love the texture of this landscape in winter. It's crazy, I mean things that really looked like graveyards of dead twigs in summer have all of a sudden sprouted lush soft green foliage. It's really cool, [you find] tiny little gardens in rock crevices. There's barely soil sometimes in those little cracks, but there will be a little *Crassula* growing in there … This is quite a harsh environment, with salty air, only a little bit of rainwater, harsh very dry hot summers. It's a very specialist group of plants that can thrive here. I find that very inspiring'. (22) 'The thing is, with this vegetation, you have to stop and get out and notice the detail, and you'll be blown away. You really have to zoom in and then you see magical things happen'. (23)

Numbers in parentheses refer to the analysis in Appendix D.

resilience capacities related to resourcefulness that we discovered in participants' stories.

In all of the food innovators' stories and reflections, we saw an orientation towards working in attunement with wider communities, both human and non-human. Food innovators expressed qualities of openness, responsiveness and flexibility, and a willingness not to be prescriptive. We saw attunement to co-creative processes as a common thread among the resilience capacities we identified related to resourcefulness (i.e., participation and collaboration, inclusivity, learning; see Table 1 for the full list). These qualities indicate a sensitive and fluid approach to working with change processes, orientated towards broad and inclusive visions of social-ecological wellbeing.

P1, for example, spoke at length about the thinking that informed how she developed SFYN. She described her approach as slow, intuitive and bottom-up, with a continuous tension between purposeful action and allowing for emergence. She reflected on the importance of having an inclusive network that invites people in and gives them space to play strong roles. In this particular context, we saw this intuitive attunement to

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Table 3. Quotations illustrating resilience capacities related to resourcefulness in the food innovators' stories (see Table 1 for a full list of resilience capacities).

Participant/resilience capacities identified	Quotation from transcript
P1: Seed and indigenous food activist; coordinator of Slow Food Youth Network Southern Africa (Resilience capacities: self-reliance; participation and collaboration; inclusivity; building social capital; accessing resources; intuition)	'A lot of it has been led by turning to where the needs are. It started around food, but actually a lot of it is about community, because there's a lot of depression, a lot of listlessness … Young people really struggle with employment; you need to struggle for a long time to make something of yourself … So just pulling people in and inviting them is so powerful … If someone reaches out: can you check my CV? I need a job, do you have anything? I think, yeah, actually I do need this thing to be done … So there's really something to be said for an individual to see these things and understand the vision and potential of it'.
P2: Permaculture farmer and performing artist (Resilience capacities: self-reliance; accessing resources; building social capital; learning)	'When we started Tyisa Nabanye we had unexpected outcomes, like, for example, even if we didn't have money when we started it, now people are starting to be entrepreneurs. We have a coffee guy, Vuyo, who bought a machine by being in this space and being exposed to markets, and supplying microgreens in restaurants, so it's also showing people that even if you don't have something, you can start something from nothing, because we all have this abundance in nature. You just need people and ideas of what to do'.
P3: Local wild food innovator (Resilience capacities: intuition; participation and collaboration; diversity of thought, perception)	'In a way, I'm trained in being instinctive, because I cook like that, and I've trained myself to look broadly and be aware of what's going on around me … That's the most important skill of all, to just be very instinctive about it … I'm insatiable by nature, I really enjoy interacting with people and I'm very open to exploring. All of those characteristics are very important when you're innovating. If you're not flexible, you're going to keep treading the same path, and if you think you know it all, you're never going to learn anything … My growth has come from being exposed to other people's thinking, seeing what other people are doing and having other people challenge me'. (57, 58, 62)
P4: Farmer and activist fighting for the preservation of key urban food producing area (Resilience capacities: innovation; collaboration; building social capital; accessing resources; self-reliance; diversity of approach)	'There's no doubt about it, farmers need to have support from government. But we're thinking we need support on the farm in terms of infrastructure and to help put systems in place – but actually the farm is supposed to take care of itself … We want to see how we can do this model with very few resources, because farmers are in that situation. We're developing a model to replace the industrial farming model in the future … We see in the future that this area will have 1000 one-hectare or two-hectare farms and a diversity of what is produced and the way it is produced. It's a dream we're fighting for'. (57)
P5: Chef capturing the unique flavours of a biodiverse, threatened hyperlocal ecology (Resilience capacities: diversity of thought, perception, approach; learning; innovation; intuition and creative process; adaptation and cultural change)	'Visually, obviously I find it extremely inspiring whether it's green and colourful like at the moment, or whether it's harsh and dead and twiggy in summer – one could almost sometimes literally interpret that into a plating or something. And then next it's thinking about the edible plants and their textures and their flavours. Often the succulents have a sort of oceanic brininess built in; they're kind of self-seasoned, and that's always a nice thing to think about, because we're at a coastal location, I find that pairs with seafood extremely well in and of itself. It's layers of inspiration for me: literal, conceptual, figurative. There's so much to take from it, for me. It's a muse that never tires, I can always draw inspiration from it'. (24)

Numbers in parentheses refer to the analysis in Appendix D.

collective needs and learning processes as being an important resilience capacity. We saw the participant as playing a strong role in guiding the flows of people and energy in the network, and particularly in encouraging young people to pursue diverse and creative livelihood strategies that emphasized the artistry and cultural significance of food.

Describing her 'instinctive' approach, P3 reflected on the importance of being willing to learn, adapt, collaborate and shift her thinking and perspective as her understanding of her dynamic context continuously evolved. This sense of openness and attunement came across particularly in her narration of her journey of foraging and learning to see the landscape differently, but then shifting her focus to the cultivation of wild edible plants as she realized the limitations of foraging as a solution to wider economic and ecological challenges of the food system.

The sharing of skills, resources and knowledge featured prominently in all of the food innovators' stories. This idea speaks to the resilience principle of broadening participation to enable sharing and learning (Biggs *et al.*, 2015). P1 tells the story of how a practice of cooking, developing new recipes and sharing food together developed in the SFYN in response to needs of feeding many people cheaply at gatherings. Her stories of group experimentation with combining and substituting different indigenous food ingredients into the pot speaks to some of the spontaneous, adaptive, unplanned and generative qualities of the network. It also speaks to the different forms of diversity, diets, livelihood strategies and forms of participation that are supported in the network. Such informal spaces, also including Tyisa Nabanye and the PHA, allow for broad participation, creative problem-solving approaches, new types of thinking and new narratives to emerge.

Inspired by stories of overcoming past challenges on this land, meanwhile, P4's strategy of developing Vegkop Farm as a model to empower small-scale black farmers speaks to innovation and collaboration as key resilience capacities in his work to help emerging farmers 'develop new knowledge and strategies for dealing

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with land reform, the economics of farming and its environmental challenges'. In his vision, policy is attuned to supporting PHA farmers with the vital resources they need, such as small shredders for compost, and replicating this approach on a wider scale to bolster the city's food security and resilience to climate change and drought.

Capacities for creativity, learning and innovation are all important aspects of co-creation. Learning, for example, ties to processes of seeing differently, being open to new experience, and assuming new values (Biggs *et al.*, 2015; Miller & Solin, 2015). All of the participants' stories reflected an ability to see differently in order to innovate and create.

Through the resourcefulness lens, we saw both strength and vulnerability in the relatively fluid and free nature of the food innovators' roles (Brown, 2016). On the one hand, they had the flexibility to navigate and shape their own creative approaches to dealing with food system challenges. On the other hand, working in the context of South Africa's extreme levels of poverty and social inequality, many of their efforts were also stymied by powerful economic, social, political and structural obstacles. As illustrated in P2's observations of seeds inspiring the view that people, too, 'can start something with nothing', self-reliance, as a resilience capacity, also includes the ability to persist in adverse, and often unjust, circumstances.

3.3. Resistance

Brown (2016) conceptualizes resistance as a process for opening up fertile spaces for change to be 'shaped and mobilised'. We saw resistance expressed in food innovators' stories in diverse ways. The food innovators described different processes of experimenting with dietary diversity and activating small, transformative ideas and spaces through diverse new narratives. They described these processes leading to small shifts in people's perceptions and experiences of food, towards growing indigenous foods in small spaces ripe for cross-fertilization of ideas and towards presenting new opportunities for youth to overcome challenges of unemployment and exclusion to become bakers, farmers, food processors and artists within networks of mutual exchange and support. Table 4 provides quotations from the food innovators' narratives illustrating some of the resilience capacities we found to be linked to resistance.

Each participant described their efforts to respond creatively to deep systemic challenges such as disconnection from the natural world, land insecurity, poverty and injustice, livelihood struggles and confrontations with powerful interests. These processes reflected key questions in the resilience literature, such as: who decides the course of transformation? What is challenged? How strong is the resistance to change (Moore *et al.*, 2014; O'Brien, 2012)?

While the self-reliance of stretching scant resources and building projects autonomously from the ground up came across in each of the food innovators' stories, so too did their sense of struggling against power asymmetries. For example, P4 spoke about the many sleepless nights he and other volunteers spend on filing paperwork with the city to oppose proposed housing and commercial developments for the PHA and to counter the arguments of 'progress' presented by deep-pocketed developers. He described being exhausted by these added burdens, which drained precious time and energy away from the more creative and energizing pursuits of farming, mobilizing his community and advocating for an agro-ecological farming model for the PHA.

Amidst the continuous dull slog of navigating bureaucracy, P4 framed his project in terms of a broader narrative of resisting corporate control and concentration of power in the food system, drawing on his own past experience as a commercial tomato grower who had been 'captured in the value chain'. Owning an acre of land in the PHA, he acknowledged a very personal stake in preserving the area and promoting his vision of it as a vital strategic resource for agro-ecological farming to produce healthy, affordable food within city limits. His narrative of a desirable future for the PHA emphasized democratic participation, knowing where your food comes from and food security for the urban poor.

P1 likewise often spoke about the potential of food to engage people and shift their values systems. 'We need to give food respect, and a much more central place in our lives', she says. This participant's narrative advocated for a transformative shift in how people value food – for example, in terms of its connections to our own bodily health, our 'innate' curiosity and creativity and its multidimensional relationships to land, heritage and ecology.

P3's story likewise highlights experimenting with dietary diversity as an important resilience capacity. Her collaboration with two other colleagues involved experimenting with different wild native plants to see whether they are edible. The story she told highlighted her commitment to discovering wild local plant species with the potential for wider cultivation, collaborating with others to learn about the plant's reproductive cycles and how to process the tubers to make them palatable. As she notes, such processes are not on the research agendas of traditional institutions. In the particular setting of the Western Cape, with its unique biodiversity that remains relatively unexplored for food potential, it falls to self-motivated food innovators to initiate attempts to do what generations of farmers and plant breeders over the millennia have done in different parts of the world: domesticate new edible plants from wild species that may ultimately be more resilient to climate change than non-indigenous plant species.

As P5's reflections make clear, working with food offers endless creative possibilities for experimenting with novelty. Through the participant's processes of discovering, interpreting and sharing food and flavours inspired by the strandveld fynbos, this knowledge is shared more widely, in this case with upscale diners. As a chef, P5's work at first seemed less political than that of the other food innovators. Yet surprisingly, a sense of active resistance to the commodification of place and the images manufactured in the food system came through quite palpably in his counter-narrative of interpreting the landscape onto the plate in different figurative, literal and conceptual layers. We came to see him as creating a radically different experience of food, helping to shift people's relationships with food from that of a passive consumer to that of an active participant experiencing food in all of its connections to the landscape.

This work raises the possibility of more enduring transformations of dietary and cultural practice beginning to take root, connected to a more intimate sense of the relationships of place and ecology to food. Describing her adventures in entomophagy, P1 observes that the practice is about a change in values: understanding the cultural barriers that prevent many people from seeing insects as a food source and 'having respect for those creatures who share the land with us'. The act of bringing food to life through creative engagement thus becomes a powerful form of resistance to the placeless commodification of industrial food and a powerful means of expressing respect for the land, learning from the land and appreciating how we are supported by the land.

In shifting the narratives of food from poverty, commodification and dependence to narratives of self-reliance that are enacted

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Table 4. Quotations illustrating resilience capacities related to resistance in the food innovators' stories (see Table 1 for a full list of resilience capacities).

Participant	Quotation from transcript
P1: Seed and indigenous food activist; coordinator of Slow Food Youth Network Southern Africa (Resilience capacities: experimenting with dietary diversity; challenging entrenched mind-sets; resisting exploitation; self-reliance)	'It's about eating as biodiverse a diet as we can, and stopping eating because that's what the industry tells us we want to eat. We have so many varieties: we have an indigenous rice, all these different grains that are drought tolerant. We have to be very progressive and innovative with our recipes, because people are so stuck in eating in certain ways. It's such a complex thing, and indigenous food speaks to a lot of it: it's about cooperative systems, employing people with work around food that is spiritual and inspiring'.
P2: Permaculture farmer and performing artist (Resilience capacities: artistry and creativity; challenging entrenched mind-sets; diversity of narratives)	'I'm trying to recruit more youth into agriculture, and I'm trying to conserve more heritage seeds and integrate this with performing arts and telling the story of what seed can be: seeds produce a crop, but they are also power and knowledge. With me sharing this knowledge, more people will be aware of climate change, and letting nature teach us, not actually controlling nature. Seeds mean so many things to me: they mean collective minds that will share the same concept of working with nature'.
P3: Local wild food innovator (Resilience capacities: experimenting with dietary diversity; challenging entrenched mind-sets)	'About five years ago I made a lunch where I roasted vegetables that included *Watsonia* corms that were … so bitter, it was dreadful … Part of our joint crossover mission at some point was to find out if we could make these things palatable … We've been experimenting with a whole variety of ways of leaching them in water, brine, fermentation, ash … Suddenly you have the potential of something possibly beginning to be commercial, from being a no-go zone to discovering certain kinds of growth habits that plants have developed for themselves. To see which plants could reproduce themselves fast enough to become a crop is really interesting … I'm starting with the easiest ones that don't need much processing, and then as time goes on, you can add more plants to explore to grow commercially on these lands where wheat crops are failing'.
P4: Farmer and activist fighting for the preservation of key urban food producing area (Resilience capacities: redressing food and land injustices; challenging entrenched mind-sets; resisting exploitation; diversity of narratives; strengthening participation)	'A lot of the issues we touch on are actually poor governance. A lot of politicians in the city think they're not accountable to us, the voters, so we go through a lot of rigmarole of setting up civics and getting organized … I think especially the people who get into power don't understand the deep values of freedom … So the response is, we will govern in your best interest. I don't get democracy to be like that, I get democracy to be that people are part of the decision-making process'. 'Once I tell people in [two] sentences, they get it: do you know where your food comes from? Do you know if this area is gone, it is going to impact you?'
P5: Chef capturing the unique flavours of a biodiverse, threatened hyperlocal ecology (Resilience capacities: experimenting with dietary diversity; challenging entrenched mind-sets; artistry and creativity)	'Visually, obviously, I find it extremely inspiring, whether it's green and colourful like at the moment, or whether it's harsh and dead and twiggy in summer … Next it's thinking about the edible plants and their textures and flavours. Often the succulents have a sort of oceanic brininess built in … It's layers of inspiration for me: literal, figurative, conceptual … I think it's just literally thinking about the landscape differently, diversifying your diet and expanding it. We have such diverse abundance we can actually live off of'.

through growing food, sharing resources, creative experimentation and building strong, creative, inclusive communities, food innovators could be seen as actively opening up new possibilities for transformation. In shaping diverse new narratives of food, for example, food innovators may be exercising their agency, in small and subtle ways, to shift mental models and resource flows within their spheres of influence (Westley *et al.*, 2013). Seen in this light, such common practices among the food innovators as experimenting with dietary diversity and shaping diverse new narratives can be seen as key resilience capacities linked to the idea of resistance. They widen the diversity of thinking and practice within small, fertile niches of the food system, where transformative new values may potentially grow and gain traction.

4. Reflections and conclusion

Using the IPA method enabled us to appreciate the diverse and often subtle or 'invisible' ways in which food innovators seem to draw on different resilience capacities (i.e., features of complex systems that may contribute to the emergence of resilience) to shape desirable changes to the food system within their spheres of influence. By engaging with the uniqueness of each food innovator's particular story in the hermeneutic circle, we were able to situate particular individual experiences and perspectives within a broader landscape of resilience ideas. Thus, the paper's main contribution is to provide a methodology that enables us to relate lived experiences to resilience concepts in a robust way, contributing to a deeper understanding of some of the underlying qualities that may generate the capacities for resilience under particular circumstances.

The structured, sequential approach of the IPA, encompassing the iterative use of the hermeneutic circle, gave us a scaffolding upon which to explore and connect many of the different layers of experience, emotions, values, beliefs and perspectives influencing how we saw different resilience capacities being employed by each individual. We then found that the complementary perspectives offered by the 3Rs provided us with different lenses for understanding the multi-dimensional nature of resilience capacities as they appeared both within and across the stories of individuals sharing the same local context.

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Under a resourcefulness lens, for example, diversity was expressed as both a resource that could be drawn upon and as a form of inclusion through which identity and culture could be shaped. In a resistance capacity, meanwhile, we recognized diversity as an essential quality supporting rich, constructive counter-narratives germinating in the margins and informal networks (Senehi, 2002).

In general, the rootedness lens enabled us to theorize about particular values and motivations underpinning the food innovators' approaches to their work and driving them to persevere. The resourcefulness lens, which highlighted resilience capacities such as inclusivity, learning, self-reliance and creativity, put the spotlight on how we saw food innovators mobilizing people and resources in their efforts to bring about change. The resistance lens highlighted certain resilience capacities as seeding new possibilities for transformation in marginal spaces. Putting these three frames together, we see rich individual portraits of food innovators pursuing their own visions of transformation at the margins of highly complex food systems, shaped by the interplay of innumerable permutations and dynamics ranging from the personal to the global.

We found the deeply subjective nature of our enquiry to be a major challenge. Ultimately, the process of combining narrative and interpretative approaches is inextricably bound up in the double hermeneutic of the researcher interpreting the narratives shared by participants making sense of their own experiences – which both makes it possible to reach deeper levels of insight, but also necessarily limits the broader utility of those insights because they emerge from such an intimately subjective process of interpretation. In each phase of examining and re-examining the data, our interpretations continued to morph and shift shape right up to the completion of this work. As researchers, we bore a heavy responsibility in generating the interpretations of the stories through the filters of our own life experiences, values and worldviews. We were keenly aware that had we used different frames to interpret these stories or approached them with different mental models, we might have ended up with very different interpretations. We believe that the researcher can compensate for this to some extent by exercising rigorous self-reflexivity and building accountability and relationships of trust with participants into the process (Clandinin, 2007).

Given the deeply contextual and subjective nature of resilience, however, we believe that this approach has rich potential for further development as a tool both for assessing the less tangible aspects of resilience in particular contexts and as a tool to help individuals and communities understand and build resilience within their own particular contexts through interpreting their stories using resilience frames that they themselves develop and select, with the possibility of sharing their particular insights and perspectives with wider audiences. The potential trap of subjectivity within our approach could also potentially be mitigated or compensated for, to some extent, by combining it with other, more quantitative measures of resilience.

In our view, our method would be useful to explore the dynamics of resilience capacities at play in a variety of different sustainability challenges around the world. The more we can begin to understand the context-specific dynamics through which resilience capacities may arise, the better we can learn to support new possibilities for desired transformations as they emerge.

Supplementary material. To view supplementary material for this article, please visit https://doi.org/10.1017/sus.2020.23.

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Conflicts of interest. The authors confirm that this manuscript is our own original work and that this research has not appeared elsewhere. We confirm that none of the authors has any financial, professional or personal interests or relationships that would present a conflict of interest.

Ethical standards. We confirm that this research received ethical clearance from Stellenbosch University and that the highest ethical standards were followed throughout the research process.

Notes

[i] https://goodanthropocenes.net/

[ii] Abridged versions of these written narratives can be found at https://graid.earth/exploring-resilience-through-the-stories-of-food-innovators-in-the-western-cape-south-africa/.

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