

Article

Environment-Disaster-Conflict Trinomial: A Study of the Concepts of Resilience for Peacebuilding in the Anthropocene

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ABSTRACT

Anthropocene has been considered a geological period of high risk due to the indiscriminate use of natural resources and the lifestyle taken by the world population, to the detriment of ecosystem conservation. The problem requires a transdisciplinary scientific approach due to its complexity. As a contribution to studies in the anthropocene, this article aims to add resilience to the peacebuilding and show its potential in the integrated response of the different systems or levels of analysis. This approach can find a favorable echo in the study on the levels of complexity of resilience, to mobilize and succeed in situations of disasters-conflicts. At the end, we discuss some aspects for Integrative modeling, which works as lens through which the levels at which risk and vulnerability factors can be addressed. This lens supports a holistic understanding of the individual, community or nation factors that can provide a more relevant and integrative perspective on resilience for peacebuilding in a disaster context.

Keywords: peacebuilding; national resilience; community resilience; community mobilization; complexity; Anthropocene.

RESUMO

O Antropoceno tem sido considerado um período geológico de alto risco devido ao uso indiscriminado dos recursos naturais e ao estilo de vida assumido pela população mundial, em detrimento da conservação dos ecossistemas. O problema requer uma abordagem científica transdisciplinar devido à sua complexidade. Como contribuição aos estudos no antropoceno, este artigo visa agregar resiliência à construção da paz e mostrar seu potencial na resposta integrada dos diferentes sistemas ou níveis de análise. Esta abordagem pode encontrar eco favorável no estudo sobre os níveis de complexidade da resiliência, para mobilizar e ter sucesso em situações de conflito-desastre. Ao final, discutimos alguns aspectos da modelagem integrativa, que funciona como uma lente através da qual os níveis nos quais os fatores de risco e vulnerabilidade podem ser abordados. Esta perspectiva suporta uma compreensão holística dos fatores individuais, comunitários ou nacionais que podem fornecer uma perspectiva mais relevante e integrativa sobre a resiliência para a construção da paz em um contexto de desastre.

Palavras-chave: construção da paz; resiliência nacional; resiliência comunitária; mobilização comunitária; complexidade; antropoceno.



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1. Introduction

Human activities as a whole (predominantly the global economic system) are now protagonists of abrupt changes at the planetary level that demand extreme measures of reversal, according to the Anthropocene model (Gaffney & Steffen 2017). Anthropocene would be considered a geological period of high risk due to the indiscriminate use of natural resources and the lifestyle taken by the world population, to the detriment of ecosystem conservation (Keys et al. 2019). The problem requires a transdisciplinary scientific approach due to its complexity (Oldfield et al. 2013).

Both conflicts and disasters have obvious implications for bearing on some of the core themes of international relations quite directly and highly complex (Mayer 2012). The combination, at least interdisciplinary of these complex themes, should start from a closer examination for the generation and management of peace in the face of the environment-disaster-conflict trinomial (Dalby 2014) and which implies studying resilience in various dimensions for a proposal of peaceful intervention or of pacification and reorganization of countries affected by the crisis.

With regard to peace, the concept of peacebuilding reflected the concept of positive peace (Galtung 1976) and brought development to the forefront of the discussion on peace. Its aim is to serve the general good and help people lead a more harmonious life, providing effective means of ending wars and armed conflicts, promoting tolerance and mutual development. As development became a key issue on the United Nations agenda, the concept of peacebuilding was broadened. In fact, the development paradigm has guided the activities of this organization because it sees development as inseparable from peace (Paris 2004). The instruments that have been created since have attempted to meet not only the increasing demand for UN participation in the context of international conflicts but also the increasing complexity inherent in the operationalization of the liberal peace model, which requires democratization and market liberalization initiatives (Juncos & Joseph 2020). Despite its conceptual expansion, building peace in the context of UN activities requires a deepening of the debate with a view to tackling the countless questions posed by the complex nature of contemporary international relations (Kemer et al. 2016). Related themes such as disasters, among other crises, should be more explicitly considered as threats to the liberal, public order and the stability of the State, in addition to considering possible inflections in the international system based on these phenomena that are no less conflict-generating.

With regard to resilience, concepts of resilience have been around for many years, but its widespread use in international interventions is a recent phenomenon. Its study and application have not yet played such an important role in the development of peacebuilding perspectives (Juncos & Joseph 2020). Besides, in the face of the failure of past liberal peacebuilding interventions and shrinking international aid budgets, international actors are transforming their interventions, moving towards a new resilience approach to peacebuilding (Chandler 2014; Chandler & Reid 2016; Joseph 2016).

Some authors had observed that resilience in peace settings must focus on complexity, on systemic approaches, embracing local ownership, and promising agency capabilities. Resilience at various scales is critical to understanding adaptability and transformability. Without the scale dimensionality, resilience and transformation may seem be in contrast scream or even in conflict (Folke et al. 2010).

It was observed too that local actors and communities adopted a wide range of strategies to face and respond to the shocks that conflicts represent (Juncos & Joseph 2020).

Although Juncos and Joseph (2020) recognize that not all approaches equate daily adaptation with more radical forms of transformation, it is necessary to operationalize the way in which communities and individuals adapt to their changed circumstances as they seek to rebuild social and cultural cohesion. On the basis of these



insights from complexity, for a peace process to become sustainable, “resilient” social institutions need emerge from within, i.e. from the local culture, history and socio-economic context (De Coning 2016).

In this sense, the search for solutions to the problems faced by Portugal impels us to deepen the study. Portugal has been relatively unaffected by military conflicts, but have to cope with environmental disasters that have paralyzed some public sectors and people who work in them, exposing the vulnerabilities of the population. In 2017 experienced two disasters. Two large fires consumed a considerable portion of forest cover and resulted in human casualties, both fatal and injured, as well as in environmental and material damage. The environmental problems were linked to various climate phenomena that occurred during these episodes of forest fires (DFCI 2019). There, one can identify the need for a model of resilience that, instead of looking at individuals or systems to recognize what can be done to make them more resistant to external forces, adopts a holistic approach that explores the dynamic and interactive devices involved in reality.

The central contribution of this paper is to integrate earlier conceptions and draw the concept of applied resilience to peacebuilding, looking for systemic and social integrative aspects from the examination of national resilience, community resilience, and community mobilization that can be applied in the context of disasters In Portugal. It also seeks to contribute to the studies of the Anthropocene through the investigation of the natural and anthropic causes and circumstances of specific disasters and a probable transdisciplinary to explain the phenomena (Andrade Júnior 2020).

As an interdisciplinary critical reading, this paper is based on the review of models of resilience to present an Integrative Model towards Resilient Peacebuilding (IMtRP) that encapsulates the key elements of existing models while offering a more nuanced and complex systems approach to resilience in a peacebuilding environment.

Conceptual Approaches from Resilience

Parmak (2015) presents a search for words, performed in a scientific database (EBSCO) and found 3462 articles between 1972 and 2014 about Resilience. However, the meaning of this word differs greatly from area to area, from mechanics, to socioecology and clinical area or by national policy. The closer we get to the social sciences (Norris et al. 2008) and the more we talk about Resilience at the national level (Kimhi 2014), the vaguer the definitions become. Resilience applied to large societies or nations is the most criticized and least sophisticated (Kimhi 2014) definition (Obrist et al. 2010), at least from a practical point of view, because if a particular system does not have a defined structure or boundaries, it is difficult to define and measure the resilience of that system. For example, the identification of standards and metrics for measuring disaster resilience is one of the challenges faced by local, state, and federal agencies (Cutter et al. 2008).

The meaning of resilience is becoming diluted and increasingly unclear as different agendas and fields have taken up the concept, from international aid and leadership to ecological diversity. On the other hand, a broad concept of resilience often includes normative dimensions, such as international aid, cultural diversity, and the response to local civil unrest, which represent instrumental and eudaemonistic values (Brand & Jax 2007). The term is still used ambiguously as divergent conceptions of resilience are proposed. The ecological aspect is stressed by ecologists, whereas the political and institutional aspects are stressed by sociologists.

In social sciences, “resilience can be defined as capacity for collective action in the face of unexpected extreme events that shatter infrastructure and disrupt normal operating conditions” (Boin et al. 2010, p. 33). In crisis and disaster management, Boin et al. 2010 (pp. 2-5) pointed out that, in non-routine emergencies, what is known in the context of crisis and disaster management as low-probability, “high impact incidents make it



difficult for the government to respond using the four stages of traditional disaster management (mitigation/prevention, preparation, response, and recovery)". Resilience depends on this social system, which in turn relies on lessons learned from past disasters to achieve better protection in the future, and on the degree of self-organization of risk reduction measures (Jan 2013).

In engineering, resilience refers to a state of dynamic equilibrium and is defined as the time required for a system to return to a state of balance after a disruptive event (Holling 1973). Ecosystem resilience refers to dynamics that are far from stable and is defined as the amount of disturbance that a system can absorb before changing to another stable state, which is controlled by a different set of variables and characterized by a different structure (Holling & Gunderson 2002).

Recently, resilience has been conceived as a way of thinking, as an approach to address social processes such as social learning, leadership and adaptive governance (Folke et al. 2010), and as a metaphor for the flexibility of a social-ecological system over the long term: "resilience is increasingly conceived as a perspective, rather than a clear and well-defined concept" (Brand & Jax 2007, p. 12).

National Resilience

The concept of national resilience emerged from the recognition that a nation's power cannot be assessed solely by its military might, but also by its psychological aspects. National resilience deals with adapting and absorbing adversity or change caused by an external threat. Both national resilience and community resilience refer to the perceptions and feelings that people have regarding the state of their nation or communities (Norris et al. 2008), and both are assessed by individual perceptions of their sustainability rather than by their true resources (Elran 2006).

Some studies have investigated resilience as a broader social phenomenon at the national level (Chemtob 2005). National or social resilience is a broad concept and addresses the sustainability and strength of society in different domains (Obrist et al. 2010). A nation is built on the values of its citizens, their relationships, and how they prepare for the future at the individual or collective level. Another important factor to consider is that the relationship between society and the State is interactional and reciprocal. Political and national stability is threatened when national resilience is neglected.

Talking about newborns, we talk about planning, preventing, evading, mitigating, avoiding, coping, and reacting to difficult survival conditions, but also about the ability to anticipate, change and look for alternatives (Obrist et al. 2010). These capabilities should be assessed on an ongoing basis, particularly in an emergency, unexpected, and/or sudden situations, in order to monitor the community resilience level and anticipate any national security hazards. Often, in moments of extreme conflict, people in resilient societies have achieved stability by successfully dealing with traumatic events (Overy 2001).

A nation is continually changing and adapting, especially in a globalized world; thus, defining and measuring national resilience presents a challenge. But regardless of its multiple definitions, they all agree that national resilience refers to the sustainability and strength of a society in different domains.

The four factors of national resilience (Kihmi et al. 2013) are trust in political and public institutions, patriotism, optimism and social integration:

1. Trust in political and public institutions refers to people's trust in their government and their level of support for the political system;



2. Patriotism, or love for one's country, reflects people's willingness to make sacrifices for the nation and to show support for military or political responses (it is what allows citizens of democratic societies to adapt to new threatening situations; such behavioral and cognitive adaptation underpins resilience);
3. Optimism refers to the socio cognitive attitudes of the individual in relation to the state of the world – optimists will adapt better to threatening conditions and display more resilience;
4. Social integration refers to the process through which recent immigrants or different social groups are integrated into the social structure of the host society; better social integration reduces the social distance between groups and fosters more consistent values and practices (Kimhi et al. 2013).

Studies have shown that national resilience is a dynamic construct that changes according to an evolving context (Fletcher & Sarkar 2013). For example, exposure to terrorism was shown to increase patriotism in US citizens, suggesting that different aspects of the national resilience construct will be perceived differently by different groups of people and that the experience of war or tragic events can change the relative importance of some aspects of national resilience.

To determine a nation's resilience, it is important to highlight two aspects: 1) that resilience is a process that depends on the threat being examined, and 2) that some groups benefit more from local, national and international efforts (Obrist et al. 2010) because, while they may belong to the same society, not all members of that society are exposed to the same threats or have the same support, which means develop they different skills when faced with threats.

Two aspects should be considered when measuring a nation's resilience: 1) where resilience will be measured because even though a community or nation has geographical boundaries and shared destiny (Norris et al. 2008), this does not mean that people or groups living in the same place have the same outcomes or narratives, and may even be a source of tension or conflict (Kimhi et al. 2013); and 2) what is being measured, as it is important to differentiate between resilience-building processes and resilience manifests after a critical event (Obrist et al. 2010).

Community Resilience

The concept of community resilience has been discussed at different levels. The resilience of a community is more than just the sum of resilient individuals, and what makes it possible is a strong sense of community (Norris et al. 2008), which in turn reflects the interaction between individuals and the community.

Prepared, self-sufficient citizens are the foundation of a resilient community and emergency preparedness should be included in community resilience models (Uscher-Pines et al. 2012). Leikyn et al. (2013) list the 5 factors that comprise community resilience: Leadership, Collective Effectiveness, Preparation, Connection to the place, and Social Trust:

1. Leadership refers to local leaders (including trust and perceptions of leader competence and service continuity during crises). Local or governance authority are vital for community resilience (Longstaff and Yang 2008).
2. Collective Effectiveness is a characteristic of the community, expressed through perceived social support (Norris et al. 2008), cohesion and willingness to intervene for the common good. Forming a



connection (attaching) to places involves affection and emotions, knowledge and beliefs, behaviors and actions in relation to these places.

3. Prepared and self-sufficient citizens are the basis of a resilient community and authors state that Emergency Preparedness should be incorporated into community resilience models (Uscher-Pines et al. 2012).
4. The connection to the place correlates to increased community resilience (Ross et al. 2010). Forming a connection to a place can promote community resilience and community recovery (Norris et al. 2008).
5. Social Trust refers to the trust that the other members of the community to help and to the assumption that they will be willing to act in case of adversity (Cohen et al. 2013). Higher levels of social trust have been associated with different aspects of community resilience (Cacioppo et al. 2011). High levels of social trust are found in societies with lower levels of bureaucracy, conflicts, and lawsuits, which communicate with the public in a clear and transparent manner, as citizens are more around each other in the face of adversity. Social trust (and, in fact, social resilience) is a continuous process that should be integrated into our routines during times of normality and not only in times of major disasters such as forest fires.

Community resilience is an important predictor for eagling with traumatic experiences. Kimhi et al. (2012) demonstrated that after the Lebanon War in 2006, the symptoms of stress and post-traumatic recovery of older Israeli civilians depended largely on their level of public resilience and that more resilient communities were better prepared to resistant deal with highly stressful situations.

Some studies (Norris et al. 2008) suggest that community resilience has four antecedents: 1) community resilience in times of stress is increased by fair distribution of resources (Ahern & Galea 2006); 2) community resilience can be driven by community social capital and social support, i.e., to actual or potential resources that are linked to having a lasting network of relationships; 3) community resilience strongly correlates to the quality of the information and communication given to community citizens during crisis; and 4) community resilience depends on community competence, which in turn increases its ability to cope with stress and trauma.

Note that community competence has the networked equivalent of a human agency, a term that is more broadly applicable across levels of analysis. “Community competence has to do with collective action and decision-making, capacities that may stem from collective efficacy and empowerment” (Norris et al. 2008, p. 141). Longstaff (2005) argued that community competence is the capacity to acquire trusted and accurate information, to reflect on that information critically, and to solve emerging problems is far more important for community resilience than is a detailed security plan that rarely foresees all contingencies.

All communities are different. They differ in population size, economic power, living standards and dominant political choices that affect cohesion and social support. Strong communities are built on structured cooperation among their members and a highly structured community life. On the other hand, in neighborhoods with less structured communities, community life is largely determined by individuals rather than the community itself (Kimhi et al. 2013).

In Portugal, parishes are small, homogeneous communities. Several parishes in a given geographic area may or may not be part of a mid-sized or large heterogeneous community, but always belong to a municipality with a municipal leader. Often, the local or municipal leaders serve the small communities within their geographic area.



Community Mobilization

Howard-Grabman and Snatro (2003) define community mobilization as an empowerment process through which individuals, groups, or organizations in the community participate, perform, and evaluate activities in a participatory and sustained manner to improve their health and other needs, either on their own initiative or at the request of others.

Lippman et al. (2013) attempted to conceptualize community mobilization through a deductive approach based on the literature on mobilization published in four complementary disciplines: (1) social movements (sociology); (2) community empowerment; (3) community development and (4) community capacity. The authors chose the main principles of each field and identified the essential and common characteristics of effective mobilization. Studies suggest that educating the population with community strategies to discuss and address common concerns, can be much more effective in achieving this goal (Dworkin et al. 2013).

Disasters and emergencies of various kinds can leave populations in critical situations, facing multiple wounded casualties and numerous challenges. In the first hours after a large-scale emergency, the civilian population has to govern itself and provide immediate basic relief and survival care, especially to directly affected communities. Furthermore, how the community will (re) respond to emergencies is a key factor in the impact on the physical and mental health of the affected population (Beiser et al. 2010).

Community mobilization is also important to minimize major losses and losses in situations of greater risk or impact. For example, in major disasters, most people are rescued by family members and neighbors within the first 24 hours, i.e. before the arrival of the first professional rescue teams. This often happens in earthquakes, such as the 1995 Kobe earthquake in Japan, where 80% of rescued people were saved by their neighbors. When the community is correctly and effectively mobilized it can cope and help in most situations. Thus, emergency responders can worry about the most serious situations and the fastest and most effective responses for everyone (Shaw et al. 2012).

On the other hand, community mobilization is essential when dealing with (and solving) the “daily” problems of the community. In community mobilization, norms serve to promote desired behaviors and goals that must be accomplished. These efforts serve to create healthy habits, promote social integration, destigmatize marginalized groups (such as drug addicts, sex workers, and others), change policies that promote better community support services, raise population awareness of certain issues, build coalitions or create and strengthen community groups. Getting communities involved in change processes requires a mobilization strategy. However, a study that assessed community mobilization found that it falls short of expectations, not only due to lack of personnel that understands multilevel programming (Kaufman et al. 2014) but also to the lack of measurement tools to evaluate community mobilization processes, which is in line with the purpose of the paper.

Modeling towards Resilient Peacebuilding

Challenge Contexts for Modeling

To resilient peacebuilding, public institutions and policies should define measures, guidelines, and action plans to prevent and/or minimize the effects of a disaster or emergency, and to accelerate recovery and reconstruction when areas have been devastated by disasters (natural or man-made).

Although there are different types of disasters, we choose situations related to earthquakes, floods, hurricanes and fires, to illustrate our rationale:



1. The first was a major earthquake in eastern Japan, to which the country responded by defining the basic principles of building national resilience: a) to avoid human losses at all costs; b) to avoid fatal damage to critical government services and to social and economic systems; c) to mitigate damage to property and facilities and prevent the spread of damage and d) to achieve rapid recovery and reconstruction.
2. The second example is the floods in England (2007), which caused 13 deaths and submerged 55,000 buildings. The water and sewage services were suspended for 17 days, affecting 350,000 people. A 24-hour blackout affected 42,000 people, and the disruption of road and railway traffic forced many people to sleep on the road or in train cars. After suffering a great deal of damage, the UK government established a National Resilience program.
3. The third example comes from the US, where Hurricane Katrina (2005) caused massive damages, with approximately 1,200 deaths and 160,000 submerged buildings. The losses in New Orleans reached nearly \$ 125 billion. The US government reviewed the National Infrastructure Protection Plan and implemented several measures (National Resilience Promotion Office 2016).
4. The last example is the case of Portugal's forest fires in 2017. Woodland areas occupy about 67% of Portugal's national territory, providing important soil protection, water, and habitats that are vital for the conservation of one of the highest rates of biodiversity in Europe, and the biophysical structure with the most protected areas. Portugal has one of the highest rates of afforestation in the European Union, and the forestry sector is one of the most dynamic and competitive in the Portuguese economy. The year 2017 recorded the largest area of wildfires in mainland Portugal, in both the center and north of the country, burning a total of about 500,000 hectares. The high number of human and animal losses, the total or partial destruction of houses, businesses, and industrial buildings, and communication and supply infrastructures have had serious socioeconomic consequences (DFCI 2019). Sixty-four people, from 5 to 88 years of age, perished in the fires of Pedrógão Grande. In the fires of October 2017, there were 48 victims from older age groups but much more geographically scattered. About 241,000 hectares were burned on 14-16 June, and the environmental impact on the infrastructure of 521 companies was estimated at € 275 million and affected over 4,500 jobs in 30 municipalities. The official report revealed that there were flaws in the management mechanism and in the communication channels between the fire-fighting center, fire-fighting agents, local governance, and afflicted populations, and found a gap in public awareness about prevention and procedures to be adopted in disasters (see Independent Technical Commission 2018).

Resilience towards Peacebuilding in a Disaster Context

An adjusted and ready response to emergency and disaster scenarios requires an approach with complexity, uncertainty, mobilizing global resources and local capacities as a way to optimize international peace-building interventions (De Coning 2018).

A new approach to sustaining peace envisages international peace builders working with local communities to engage in peace processes that take complexity seriously, promoting iterative learning and adaptation. Building adaptive peace would embrace uncertainty while promoting property at the local level. It would also help societies to develop the resilience and robustness they need to deal with and adapt to changes, creating conditions for exercising higher levels of complexity in their social institutions (De Coning 2018).



Complexity refers to a particular type of system that has the ability to adapt, and that demonstrates emergent properties. It comes about, and is maintained, as a result of the dynamic and non-linear interactions of its elements, based on the information available to them locally, and as a result of their interaction with their environment, as well as from the modulated feedback they receive from the other elements in the system (Cilliers 2002; Clemens 2001; Mitleton-Kelly 2003; Ramalingam & Jones 2008; De Coning 2016). We therefore would need interventions with an international or national command unit, but with a community and local focus, for a more integrated response.

The Integrative Model towards Resilient Peacebuilding in a Disaster Context

This new approach can find a favorable echo in the study on the levels of complexity of resilience, while has been criticized as being overly simplistic, Individual, Community, and National Resilience form the main levels of Resilience within a broad social process, and this complex process should be understood, from the individual to the national level. Several studies have found that all three levels of resilience play an important role in helping people overcome potentially traumatic events, but only a few examine the associations between these three complex levels of resilience (Weinrib et al. 2006; Kimhi & Eshel 2009), where the role of mobilization plays a crucial role.

In an integrative modeling proposal, resilience could be seen as the ability of a community or society to face or adapt to violent external shocks in order to promote a wave of more sustainable peace, in a conceptually malleable way. In other words, resilience could act in security, in humanitarian and development agencies involved in prolonged crises, allowing dialogues for collaboration in disciplinary and professional fields (Juncos & Joseph 2020). Thus, we would have the probable transdisciplinary action of resilient peacebuilding as a process of research, training, and intervention.

The Integrative Model towards Resilient Peacebuilding in Disaster Context (IMtRPinDC) is presented in Figure 1. It presents a structure that represents a broader set of systems that shape and structure the experience and interactions, between the global, national level, and the local-community level.

In this model, resilience is an emergent property of interactions between all these aspects, to face or adapt to violent external shocks in order to promote a wave of more sustainable peace. Sub-systems interact both with each other through community mobilization, materializing the role of individuals, as agents of the system itself. This is to recognize the individual contributions of established models and to show how these combine to produce a dynamic model that seeks to respond to extreme phenomena. We illustrate the national, community, and individual level aspects for a better understanding of the integration of the model in its fullness.

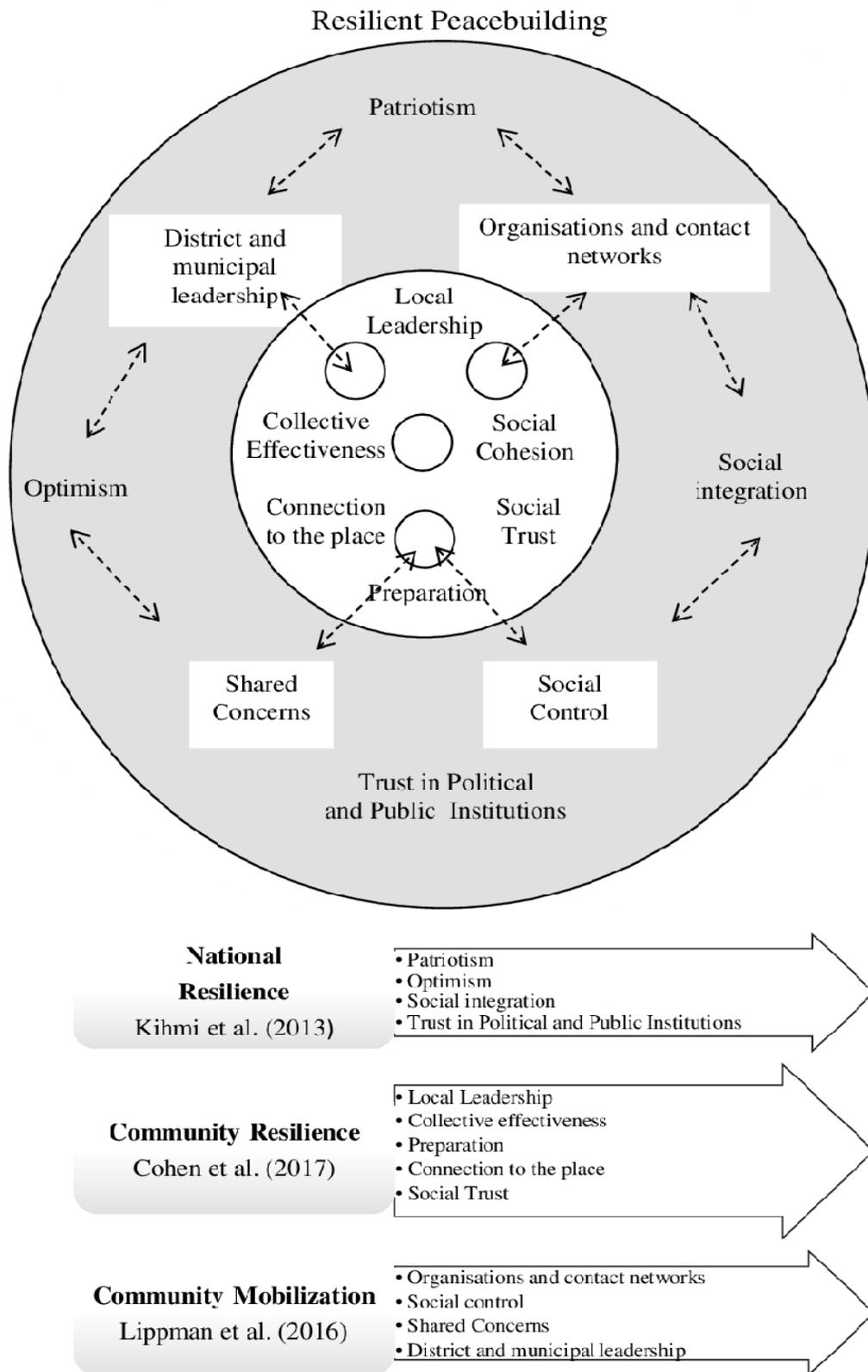


Figure 1. The integrative model towards resilient peacebuilding in a Disaster Context



National level

Forming a national identity that integrates all citizens and cultures is a process that requires the ability to resolve conflicts and promote reconciliation. Unresolved conflicts can alter the national identity and will, in turn, affect the conflicts themselves (Neta 2010). Nations are entities and have their own symbols and rituals. They are represented by more than shared blood, language or culture; on the contrary, they appear to be based on shared narratives and the perception of collective identity. It seems that when a nation's population feels threatened in some way, it rejects the integration of other cultures and defends its roots. This presents a challenge for cultural diversity, and should be taken into consideration when analyzing the case of Portugal or the Portuguese-speaking countries.

Identity and sense of patriotism are individual attitudes and values. But in people with dual nationality the sense of national identity is divided and can lead to internal conflicts, which is reflected in the attitudes and behaviors towards the host country's political system. People with dual identities may have feelings of patriotism for the country that made them citizens and at the same time feel an obligation to their ethnic group or country of origin. This is a complicated situation for both ethnic minorities and members of the majority community. Although human identity is only formed at a specific moment, it develops throughout life through personal experiences and adversity (La Guardia 2009). However, if an identity change occurs, it is due to external stimuli and internal realignments. Still, some aspects of identity do not change (Motyl 2010).

Although people may belong to different communities, one of them is always the dominant one – the one that provides the values, rules, stories, myths and a sense of historical continuity (Sonn & Fisher 1998). How these individuals with different social identities respond to social change will contribute to their dominant identity. However, as modern societies become increasingly multiethnic and culturally diverse, if there are no policies to promote a sense of citizenship and a national identity that fosters understanding, respect and tolerance, the community can shatter, creating a climate that can lead to conflicts between groups, mainly due to the constant flow of new immigrants.

Community level

A consensus has never been reached on how to increase the resilience of a community. Not only are there few studies on the topic (Castleden et al. 2011; Chandra et al. 2010), the fact that it encompasses several areas of knowledge makes it difficult to understand the mechanisms that improve community resilience and influence its development. The general opinion is that the best way to do this is to identify the individual components of community resilience and improve them to eventually build a resilient community.

Local communities and their capacities should be the focal point of resilient peace and the real driving force behind external actors' strategies, not the other way around. As with ecological systems, increasing diversity and flexibility within communities is seen as a way to promote better responses to shocks and crises (Van Metre & Calder 2016). This also implies the need to promote / strengthen formal and informal networks, rather than hierarchical structures, as they tend to be more resilient in maintaining communal peace (Menkhaus 2013).

Governments increasingly use the internet and social media to communicate with their citizens, as they provide better and faster communication, something crucial during crises (Ulmer et al. 2013). The use of social media generates citizen engagement in the democratic process and increases citizens' trust in the state through meaningful and credible bilateral communication. However, this can be hindered by restricting access to official



websites, by providing incomplete information that does not fully inform its target audience, and by low levels of computer literacy, especially in the rural population.

If transparent communication is essential during “normal” times, in times of emergency and crisis it is of the utmost importance, and measures should be taken to build citizens’ trust in the authorities through communication. Bonelli et al. (2016) state that trust can promote commitment and cooperation, and is fundamental for social interaction, particularly when there is a perception of risk. Effective communication strategies are needed to promote cooperation between citizens and institution, as this will increase the public’s willingness to obey authorities and help minimize the consequences of the emergency. Olsson et al. (2015) report that honest communication between the public and the authorities creates a dialogue that provides increases community resilience in situations of great adversity.

Individual Level

The broader resilience thinking consists of a more human-centered perspective. Distinctly, the focus of training initiatives now is on the individual, rather than the institution (Haldrup & Rosén 2013; Juncos & Joseph 2020) and on the understanding that resilience is a person's ability to continue to function in a balanced manner after a traumatic event and is a path to healthy functioning over time (Bonanno 2005, p. 136). Most research on resilience focuses on individual resilience and one study states that if security and insecurity are experienced and subjectively assessed by individuals, then resilience must be considered as an individual attribute (Antonovsky 1979).

In addition to effective mobilization of efforts, the resilience of the nation and its communities is essential for populations to quickly and effectively overcome the consequences of harmful events. The extant studies are unanimous about the need to integrate different areas, including the public, and to define all measures that should be taken during a crisis, including daily routines, how to deal with the crisis itself and the rehabilitation period. But, whatever the case, there is consensus regarding the importance of resilience in dealing with crises, especially at the local level, taking account individualities either (Aitsi-Selmi et al. 2015). The focus on individual security and training against insecurity would bring consistency to the integration of levels of complexity that would naturally reduce the pressure on organizational support structures in the face of conflicts.

Final considerations

The announcement of the Anthropocene that addresses different analytical dimensions requires conceptual and integrative openings, such as transdisciplinary research (Toivanen 2017). The contributions of resilience thinking to peacebuilding are in the possibility of navigating in holism, systemic theory and complexity theory (De Coning 2016). Such theories consider people as inserted in complex relationships, with structures, causes and processes that are seen as non-linear. It also encompasses the view that societies are in a state of constant flux. A key implication of nonlinearity and complexity is that we cannot identify general laws and, therefore, the prediction of future events and patterns of transformation of the system becomes impossible. Another aspect is that the complex nature of contemporary conflicts requires a systemic understanding that goes “beyond past project-oriented approaches and silos” towards the transformation of entire systems or regimes. Resilience, therefore, encourages an integrated or comprehensive approach to the crisis: resilience means bridging short-term humanitarian intervention and long-term capacity building (Juncos & Joseph 2020).

Resilience has the potential to move the peacebuilding field from a series of one-off, technical and project-oriented interventions to a more systemic approach to address the root causes of conflict. Complexity and



diversity are also relevant to the analysis and understanding of situations affected by conflicts, because they consider other perspectives and the perspective of the “other”.

Disasters that affect societies whether man-made or of natural origin create great difficulty and adversity for their populations. For a society to be well prepared for adverse situations, disasters or emergencies, it is important to mobilize populations and create the conditions to prepare them by disseminating information and raising awareness, and by providing training, resources, infrastructure or concrete leadership actions.

Preparing for and anticipating the impact of disasters and conflict early on can minimize or even eliminate their costs and consequences. It is essential to help people return to normalcy as soon as possible or, if necessary, to help them rebuild their lives with as few scars as possible. Portugal has been hit by increasingly frequent serious natural phenomena. Thus, studies on resilience are urgently needed to educate the population and the country’s authorities.

The integration of the model by levels of resilience, from the most elementary to the most complex, invokes a set of disciplines to address the issues emerging from the problems of natural disasters as catastrophes and environmental crises, which influence the development and economic stability of the countries involved, the institutional, social, individual and material losses they suffer.

The integration of knowledge and the parties involved also raises a transdisciplinary approach (Nicolescu 2002; Klein 2015) to the complex treatment of the related problems. The concept of resilience applied to peacebuilding, “resilient peacebuilding” is a construction based on holistic and systemic theories in the transdisciplinarization phase, with the potential for applicability as a “pacifying” transdisciplinary action.

The target audience for this paper are researchers interested in understanding the factors that protect against natural disasters, and emergency management personnel looking to improve disaster prevention, preparedness and response. In addition, the Integrative Model towards Resilient Peacebuilding in Disaster Context (IMtRPinDC) encourages educators, and others working to support the outcomes of individuals, to move their focus away from identifying levels of resilience for those individuals towards considering a range of environmental, relational and psychological factors which impact on individuals and groups of people in a dynamic way. It provides a lens through which consider these factors and begin to identify the influences they have upon the two axes of protective and risk factors, vulnerability and invulnerability, and how emergent resilience is influenced. This lens supports a holistic understanding of the individual or group within the educational context and therefore can provide practitioners too with a more pertinent perspective on approaches to support the emergence of the resilience of learners.

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