

SOCIAL RESILIENCE AS A THEORETICAL APPROACH TO SOCIAL SUSTAINABILITY¹

Review paper

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Abstract:

We are witnesses of problems caused by climate change and dramatic growth of urban systems, which are increasingly being discussed and analyzed in political and academic circles. This rises the question of how social communities should deal with these problems, how they should overcome them and continue growing without suffering from psychophysical consequences. Social sustainability is an important concept that offers answers to this question. Besides that, the social resilience theory offers models for creation of socially sustainable and healthy communities.

In this paper the concept of social sustainability and the social resilience theory will be explored for the purpose of defining characteristics of resilient communities, for resilient communities are the only ones capable of responding and overcoming great social changes and natural disasters when faced with them.

Keywords: *climate change, urban systems growth, social sustainability, social resilience theory, characteristics of resilient communities*

1. INTRODUCTION

Sustainability concept was created in the early 1970s as a reaction to a dramatic growth of urban systems and modern development practices leading toward a global en-

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vironmental and social crisis (Wheeler, 2004: 19). This concept is important for society, economy and environment, especially nowadays when we are witnesses to many natural disasters caused by climate changes and global warming of the Earth.

Climate changes are increasingly being recognized as an issue of key strategic importance, especially by political and academic communities. Many countries have undertaken steps to address climate change issues, both at local and international levels. It is necessary to reduce the level of emissions, increase the quality of life, preserve natural ecosystems, manage natural resources in a sustainable manner, and provide a high level of resilience to climate changes (C, 2013: 10). In order to achieve all of the above, it is necessary to create a sustainable community capable of handling changes and adapting to them. The social sustainability concept established within the social resilience theory will be further explored in continuation of this paper.

2. SOCIAL SUSTAINABILITY

The term 'sustainability' can lexically be defined as "the ability to maintain something undiminished over some time period" (Lélé, Norgaard, 1996: 355) or „a state that can be maintained at a certain level“ (Kajikawa, 2008: 218). Social sustainability revolves around a man or a group of people, i.e. a specific society. Sustainable society is the one that lasts for several generations, which is far-sighted and flexible and wise enough to prevent destruction or undermining of physical and social systems on which it stands (Janić, 1997: 32). Therefore, social sustainability implies avoiding possible tensions or serious social conflicts (Slijepčević Marković, Ilić, Ristić, 2013: 209). It also implies a fair distribution of products and narrowing the gaps in levels of development between different social and territorial groups (Vujošević, Spasić, 1996: 4).³

Social sustainability includes, among other things, involvement of local population, and investment, technology and cultural diversity of the environment, and it requires a certain level of quality of life and safety (Zeković, 1996: 234). Basic social indicators of sustainable development are following: the impact on general and specific (regional) models of social development, records of certain characteristics of a particular area (cultural, spiritual, natural) that need to be carefully preserved and developed; the impact on demographic phenomena and the impact on social contents whose structure and distribution should be incorporated into urban plans (Stojkov, 1998: 204).

Social sustainability can be based on social sustainability of individuals and their well-being (health, housing, maintenance, education, mobility and equality) or on social sustainability of a collective/community. Therefore, the study of social sustainability is further examined within the theory of social resilience, which defines the characteristics of socially sustainable individuals and groups.

³ This can be associated with the principle of sustainability of social equality, which seeks to ensure for all races and social classes to have equal distribution of resources, access to available facilities, as well as to social welfare: safety, health and equal conditions for all members of the community in terms of housing related issues, and use of urban and community services and recreational activities (Bătăgan, 2011: 81).

3. SOCIAL RESILIENCE

The resilience concept, which was originally created to explain ecological processes, was further developed and applied to social problems. That resulted in its association with social sciences, which brought it closer to becoming a theory (Röhring, Gailing, 2010: 79). Etymologically, the term *rezilijentnost* in Serbian language is a translation of the English word *resilience*, which originated from the Latin word *resilire* meaning *to rebound* or *to recoil*, and it was initially used in physics and material sciences to describe the ability of material properties to withstand large forces, shocks or pressures (USAID, 2006: 10; The Young Foundation, 2012: 11). The literal translation into Serbian would be *elastičnost* or *fleksibilnost*, but in most of the local literature the term *rezilijentnost* is used instead.

In the 1940s, the application and meaning of the term was expanded when resilience became relevant for social psychology and psychiatry⁴ (The Young Foundation, 2012: 11), and it gained further popularity in 1973 when a Canadian ecologist, Crawford Stanley (Buzz) Holling, introduced the concept of resilience in ecology (Holling, 1973: 15). From that moment on the significance of the term started growing, and its use has been expanded to a variety of academic and political areas: ecology, social science, economics and engineering⁵ (The Young Foundation, 2012: 11).

Despite the wide range of disciplines in which the term is used, the most popular interpretations of resilience were found in psychology and ecology, according to which it is the ability of an entity (person, ecological systems, companies etc.) to cope with adverse events, and then bounced back and returned to its functional state (The Young Foundation, 2012: 11-12).

Sociologists use the term ‘resilience’ to explain the human ability to return to its normal state after absorbing some stress or after surviving some negative changes (Surjan, Sharma, Shaw, 2011: 17-18). Its unique signature is its ability to transform adversity into personal, relational and collective growth, by strengthening the existing social engagements and by developing new relationships, with creative collective actions (Cacioppo, Reis, Zautra, 2011: 44).

There are many ways to detect resilience in lives of people and their communities. There is an abundance of resilience examples, this subject pervades everyday conversations and serves as a source of inspiration for persistence in challenging times. The term *resilience* refers to the *ability to recover*. However, the scientific use of the term often includes additional conceptualization of resilience, which extends beyond this initial definition.

Kate Murray and Alex Zautra have used this wider conceptualization of resilience in order to define the term as an adaptive response to adversity expressed through following processes: 1. recovery, 2. sustainability and 3. growth. All these processes cap-

⁴ Most of these early works were centred on child coping strategies, and the ability of children to bounce back after difficult or traumatic events, such as death of a family member or separation from their parents. This has led many researchers to wonder why certain children were psychologically more adept at dealing with adverse periods in their lives than other children, and what were the ‘protective factors’ that enabled them to do this (The Young Foundation, 2012: 11).

⁵ Including development studies, disaster studies, climate change and environmental studies, business management, genetics, and social and economic policy (The Young Foundation, 2012: 11).

ture specific aspects of resilience reflected in experiences of people and in resilience-related literature. The most important of the three process in the recovery and it has the biggest coverage in the literature on resilience. The reason why this process is of such importance is the fact that people who undergo some trauma mostly experience consequences which affect their existence, so, in order to re-establish the equilibrium after such adverse event, they need to make some psycho-physiological and social adjustments, i.e. they need to recover. It has been established that majority of people are able to continue with their lives despite stressors impact, and that serves as a testament of the common experience of sustainability. People are able to continue with their personal agendas seemingly unaffected by impacts, or with only slight variations in functioning. This could imply the sustainability of the innate human positivity regardless of the circumstances and stressors humans are subjected to. Resilience also includes growth reflected in progress and changes in perspective which came as a result of some adversity. It may even give some new meaning to life (this aspect of resilience is also related to the concepts of posttraumatic growth). People can come out of a stressful situation equipped with new skills, wiser, with improved self-esteem and with changed perspective on life in general (Figure 1) (Murray, Zautra, 2012: 337-338).

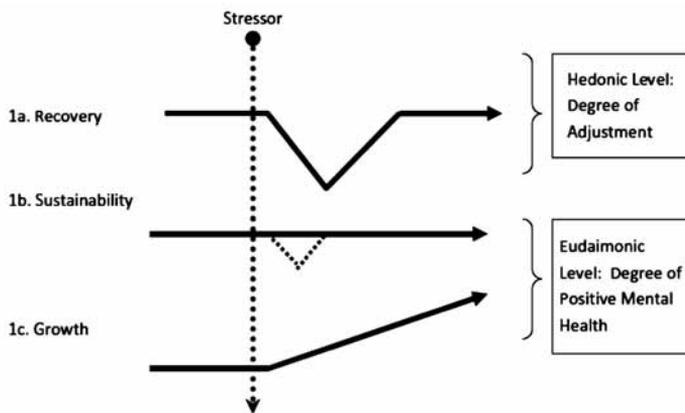


Figure 1. Resilience trajectories of recovery, sustainability and growth (Murray, Zautra, 2012: 338).

When examining the features of resilient reactions it often happens that people and communities which are successful in one aspect of the resilience are unsuccessful in another. It is possible for them to recover from adverse circumstances without learning from the experience, as well as to grow during traumatic events, but still to struggle with recovery.⁶ Three resilience trajectories (recovery, sustainability and growth) are equally applied to communities as well as to individuals (Murray, Zautra, 2012: 339).

Many authors have given their definitions of the term social resilience. So, for example, P.H. Longstaff believes that social resilience is “the ability of individuals, groups or organizations to continue their existence, or remain more or less stable” when faced with some kind of disorder (Longstaff, 2005: 27). Hans-Joachim Bürkner marks

⁶ This is evident among soldiers returning from combat with a greater sense of purpose in their lives, but still suffering from posttraumatic stress disorders (King, L. et al., 1998).

social resilience as the ability of individuals, social groups or items to compensate for the damage incurred or to restore the functionality that they had lost, i.e. the ability to be flexible when responding to danger (Bürkner, 2009: 14). T. Lang believes that social resilience represents “the motivation of people that allows them to cope with critical events” (Lang, 2010: 16), and J.T. Cacioppo and his associates believe that social resilience is an inherent multilevel construct and it is „revealed by capacities of individuals, but also groups, to foster, engage in, and sustain positive social relationships and to endure and recover from stressors and social isolation“ (Cacioppo, Reis, Zautra, 2011: 43). Fran H. Norris and his associates define social resilience as “a process linking a set of adaptive capacities to a positive trajectory of functioning and adaptation after a disturbance“ (Norris, F. et al., 2008: 131).

Social resilience represents a paradigmatic change in the mindset of people when perceiving other people and their problems, and therefore it requires a fresh perspective on determining interventions which are to increase the likelihood of a resilient outcome. Social resilience is „a multilevel construct because it represents features of a group as well as features of individuals in the group“ (Cacioppo, Reis, Zautra, 2011: 46). Therefore, it is studied as an individual resilience and collective/community resilience.

Individual resilience. Individual resilience represents “the processes of, capacity for, or patterns of positive adaptation during or following exposure to adverse experiences that have the potential to disrupt or destroy the successful functioning or development of the person“ (Castleden, McKee, Murray, Leonardi, 2011: 372). Resilience is an ongoing process. It is not limited to an adverse experience, because it runs regardless of it. Resilience represents certain individual qualities which make it possible for individuals to be flexible in stressful situations, and which help them to adapt and learn from their experiences. Many factors and different life aspects influence development of these qualities, such as cultural background, upbringing, experience, etc. (Rutter, 2012: 40-41).

Individual resilience is intrinsically multi-levelled and it includes: distinctive social manners (e.g., agreeableness, trustworthiness, fairness, compassion, humility, generosity, openness); interpersonal resources and capacities (e.g., sharing, attentive listening, perceiving others accurately and empathically, communication care and respect for others, responsiveness to the needs of others, compassion and forgiveness); and collective resources and capacities of individuals (e.g., group identity, centrality, cohesiveness, tolerance, openness, management rules) (Cacioppo, Reis, Zautra, 2011: 44).

Nine individual resources, fostering social resilience, can be singled out. The first individual resource refers to the capacity and motivation to perceive others accurately and empathically: understanding the diverse experiences and perceptions of others from their perspective. The second individual resource implies the feeling of connection with other individuals and collectives: the acceptance of stable, positive relationships by encouraging well-being without social exclusion or ostracism. The third individual resource represents communication with care and respect for others: signs of concern for their well-being and understanding through certain acts. The fourth individual resource implies perceiving others in regard to oneself: promoting relationships with others without underestimating one’s reputation, which often leads to defensive self-protective behaviors that can create further distancing from others. The fifth individual resource consists of values which promote welfare of oneself and others: benevolence (concern for others with whom one has frequent contact) and universalism (concern for humanity).

These values enable prosocial cognition, motivation and actions, such as altruism, tolerance, cooperation, empathy and trust. The sixth individual resource is the ability to appropriately and potentially respond to social problems: promoting the constructive, team-oriented problem-solving strategies while avoiding individually focused strategies and social pressures that repress open communication. The seventh individual resource includes adequate and effective expression of social emotions: enabling people to express emotions in constructive ways (gratitude, compassion, jealousy and loneliness) and promoting appropriate responses to others' displays of social emotions (sympathy, forgiveness and respect). The eighth individual resource is trust, i.e. belief that others can be relied upon, and willingness to act on the assumption that the other person is benevolent. When people trust others, they can open themselves to them and signal their intent, thereby inviting cooperation and mutually beneficial actions; trust tends to depend on a situation and it includes prior experience with same persons. The ninth individual resource are tolerance and openness: evaluation of different perspectives and recognition that many tasks require coordination among persons with differing backgrounds, values, and priorities (Cacioppo, Reis, Zautra, 2011: 47).

Some authors perceive individual resilience same as the psychological resilience. The term resilience started frequently appearing in psychological sciences in the 1980s and was a metaphor for „the ability of individuals to recover from exposure to chronic and acute stress“ (Ungar, 2012: 13), or „the capacity of individuals to successfully adapt and cope well with negative experiences and unfamiliar situations, especially highly stressful or traumatic events“ (Bonnano, 2005: 136) and “capacity for generative experiences and positive emotions” (Bonanno, 2004: 20-21).

Key characteristics of individual resilience include a strong sense of personal capacity and efficiency, thorough awareness of the changing conditions, strong problem-solving skills and strong social connections and support systems (Luthar, Cicchetti, Becker, 2000). There are lots of evidence that capacity of an individual to deal with challenging events „is significantly affected not only by the speed and flexibility of the response but also by the ability of individuals to anticipate and shape the pathways on which they are travelling“ (Edwards, Wiseman, 2011: 186).

Collective/community resilience. Community resilience is a complex process which involves interaction between individuals, families, groups and the environment. The community is identified as a dynamic and changeable social framework that includes a group of individuals and organizations bound together by geography and perceived self-interest (Withanaarachchi, 2013: 6). Communities consist of built, natural, social and economic environments that influence one another. Discussions on community resilience often note that the whole is more than the sum of its parts, meaning that a collection of resilient individuals does not guarantee a resilient community (Norris, F. et al., 2008: 128). On the other hand, people in communities can be resilient together not merely in a similar way (Brown, Kulig, 1996/97: 43), which means that the community resilience does not guarantee the same individual resilience.

The most important thing to understand is that even those individuals that seem to be more resilient than others also suffer some sort of trauma-related stress, though probably to a lesser extent. Reactions such persons experience when exposed to a stressful situation are mostly milder in nature and degree, and usually short-lived, and they generally don't disrupt the individual's ability to function. So, just because some individ-

uals have stronger resilient reactions should not imply that they feel no stress at all, it just means that they are able to cope with such events without letting them affect their daily routine (Bonanno, Mancini, 2008: 371).

Community resilience is determined by the amount of necessary resources community has at its disposal, and its ability to organize itself when faced with a potentially dangerous situation, or even before that (Surjan, Sharma, Shaw, 2011: 19). Community resilience has capacity to predict possible hazardous situations, to find the ways to reduce their impact and to prompt rapid recovery during and after such events by adapting, evolving and growing (Withanaarachchi, 2013: 6).

Community resilience is more popular and has been explored more than the individual resilience, thus many authors gave their definitions of the concept. So, for example, D. Brown and J. Kulig define community resilience as “the ability of the community to recover from or adjust easily to misfortune or sustained life stress” (Brown, Kulig, 1996/97: 31 cited in Rhoads, 1994: 51), and D. Paton and his associates deem it „a capability to ‘bounce back’ and to use physical and economic resources effectively to aid recovery following exposure to hazard activity“ (Paton, Millar, Johnston, 2001: 158).

W.N. Adger emphasizes that community resilience is “the ability of communities to cope with external stresses and disturbances as a result of social, political and environmental change“ (Adger, 2000: 347), and A.K. Jha and his associates see it as „the ability of communities to self-organize, adjust to stresses, and increase their capacity for learning and adaptation; the ability to respond positively to change or stress and maintain its core functions“ (Jha, Miner, Stanton-Geddes, 2013: 22).

Different approach to defining community resilience is offered by M. Ganor and Y. Ben-Lavy, who believe that community resilient should be able „to deal with a state of continuous, long-term stress, (...) to find unknown inner strengths and resources in order to cope effectively with long-term pressures, (...) the measure of adaptation and flexibility“ (Ganor, Ben-Lavy, 2003: 106). Norris and associates also see community resilience as „a process linking a network of adaptive capacities⁷ (resources with dynamic attributes) to adaptation after a disturbance or adversity“ (Norris, F. et al, 2008: 127–128).

A number of authors have defined the community resilience in the context of preparations for possible disorders. So, for example, M. Bruneau and associates define community resilience as “an ability to prevent hazard-related damage and losses and post-event strategies designed to cope with and minimize disaster impacts” (Bruneau, M. et al., 2003: 735). Also, R. Ahmed and associates define community resilience as “the development of material, physical, socio-political, socio-cultural, and psychological resources that promote safety of residents and buffer adversity“ (Fayazi, Lizarralde, 2013: 149).

According to S. Kimhi and M. Shamai community resilience is “its ability to cope with the ongoing political violence” (Kimhi, Shamai, 2004: 439), and according to B. Pfefferbaum and associates „the ability of community members to take meaningful, deliberate, collective action to remedy the effect of a problem, including the ability to interpret the environment, intervene, and move on“ (Pfefferbaum, B. et al., 2005: 349).

⁷ F. Norris and associates believe that community resilience stems from four main sets of adaptive capacity: 1) Economic Development, 2) Social Capital, 3) Information and Communication and 4) Community Competence, that together provide a strategy for readiness in case of disaster (Norris, F. et al., 2008: 127).

Community resilient is, in regard to recovery after disorder, defined as capacity of a community, its skills and knowledge that enable to fully participate in the recovery of disaster (Coles, Buckle, 2004), and as ability „to use the experience of change to continually develop (...) and to respond in creative ways to stressor or change that fundamentally transform the basis of the community“ (Maguire, Cartwright, 2008: 5).

All the abovementioned definitions find that a resilient community incorporates the ability to recover and to evolve in order to buffer all forthcoming shocking events. The aspect of evolving is crucial for building a community resilient to climate changes, because the human capacity to adapt to climate changes is not infinite (Edwards, Wiseman, 2011: 187).

Norris and his associates see the community resilience as “a *strategy* for promoting effective disaster readiness and response” (Norris, F. et al., 2008: 128). Unlike many stressors, disasters affect entire communities; community members are exposed to it together and they must recover together (Norris, F. et al., 2008: 145). Qualities of a disaster community resilient are following: awareness of hazards threatening the community; understanding of the community structure, people’s age, where they live and what type of needs they have; awareness of the available options and needs of each community member; understanding of the available resources and from where they will be provided; understanding of the geographical area, constructed environment and transport infrastructure; understanding of the solutions to save the community; implementation of the recovery process in the place directly affected by a disaster; dissemination of information to the community members; and facilitating leadership and possibility to assess community’s vulnerabilities (Withanaarachchi, 2013: 7).

The Center for Community Enterprise (CED) has developed a model of community resilience based on what people know about successful community functioning. This model consist of two levels of information with four dimensions of resilience in its center, and those are: 1) people who support the “it can be done” attitude reflected in their proactive approach to change; 2) social and economic development organizations which disseminate information and involve public into programs of recovery/sustainability/development and which demonstrate high level of collaboration with others; 3) resources which need to be analyzed and appropriately used in order for objectives for the long-term future of the community to be achieved; 4) community processes used to examine local planning, participation and implementation process; the plan gets integrated in work of organizations involved in planning, and it contains strategies which bring together social and economic issues and their solutions; resilient communities have a wide vision of their future, they involve key sectors in goal implementation process, and they evaluate results in accordance with the rules (Figure 2). The four dimensions are interconnected. The first three describe the nature and variety of resources available for development of a community. The fourth dimension describes the approaches and structures available to a community for productive organization and usage of these resources (USAID, 2006: 25-26).



Figure 2. *The Community Resilience Model (USAID, 2006: 25).*

Each of the resilience dimensions breaks down into a series of more detailed *resilience characteristics* representing specific factors which can be examined in a community for estimate of the level of its resilience. This model defines 23 characteristics, but since each community is unique, they haven't been finalized. Communities will experience different levels of resilience for each characteristic, and these levels may vary over time (USAID, 2006: 26).

4. SOCIAL RESILIENCE CHARACTERISTICS

Taking in consideration the theoretical assumption of social resilience, both individual and collective/community ones, it can be concluded that resilient individuals or communities, during the period when faced with disasters or changes, go through phases of recovery, sustainability and development. Since the Earth is faced with problems that cause climate changes, and its urban systems with the dramatic growth and development, it is necessary to define the characteristics of resilience systems. Several authors (Bruneau, M. et al., 2003: 737-738; Wilkinson, 2011: 162; Jha, Miner, Stanton-Geddes, 2013: 9-10, 47) have defined those characteristics, as seen from the social resilience perspective, and they can be grouped as shown:

- robustness - the ability of the community to withstand a given level of stress without suffering degradation;
- strength - refers to the power of the community to cope with a change;
- redundancy (the extent to which elements are substitutable in the event of disruption, degradation) - refers to the resource of diversity: communities that depend on limited resources are less capable to cope with changes involving consumption of resources (dependence on resources as opposed to redundancy);

- speed (the capacity of community to achieve goals in a timely manner with minimal losses) - refers to how fast the communities can react to problems and use resources;
- ability to predict - the ability of the community to strategically anticipate future changes;
- awareness - information on a disaster or change gives community members a basis for determining the priority measures for its alleviation;
- resourcefulness - the capacity of the community to, if compromised, identify problems and mobilize resources;
- social integration - helps improving the quality of life, attractiveness and elimination of stigmatized images of communities;
- cultivation of systems and education - use of transferable knowledge, skills and resources that affect social systems; combining experimental and experiential knowledge;
- participation - involvement of community members and stakeholders in urban projects, including public-private partnerships;
- possibility of self-organization - the ability of the community to organize itself;
- reduction of urban poverty - it is especially sensitive to effects of changes and disasters due to location of homes of poor members of the community, lack of income and lack of reliable basic services.

The aforementioned 12 characteristics are deemed as key ones and they need to be met during the social resilience system development process. However, as it was already noted, these characteristics have not been finalized because every community is different, unique.

5. CONCLUSION

Climate changes and dramatic growth of urban systems are causing problems that social communities of today are forced to deal with. The question raised in this paper is how should communities handle these problems, how should they overcome them and continue to develop without psycho-physical consequences. In pursue of an answer to this question the concept of social sustainability and social resilience theory, which define models and characteristics of resilient communities, were explored.

A man or a group of people are in the center of social sustainability which includes involvement of local population, capital, technology and cultural diversity, and which brings certain level of quality of life and safety. Social sustainability can be based on social sustainability of an individual or a collective (community) and their well-being. Also, social resilience is studied as an individual resilience (representing characteristics of individuals in a group) and as a collective/community resilience (representing characteristics of a group).

Social resilience theory defines three processes which make a response to a disaster or change: recovery, sustainability and growth. Recovery is the focus of literature

on social resilience and it suggests that people are able to make necessary psycho-physiological and social adjustments to regain the same level of functioning they had before the disaster or changes occurred. Sustainability implies preservation of positive impacts of people even if they are exposed to a negative impact. Growth implies additional profit and progress for the community after some disaster, by developing new skills, gaining knowledge and by learning, as well as by improvement of the overall well-being, esteem boost and gaining new life perspectives.

A community resilience model was developed based on the theoretical assumptions of social resilience, and it highlights four interrelated dimensions of resilience: people, social and economic development organizations, resources and community processes. Resilience dimensions are further developed into a series of detailed resilience characteristics which have not been finalized because they represent specific factors of each unique community.

This paper is a review of the social sustainability and social resilience theory related literature, but it also defines a model and characteristics for creation of resilient social systems. Such systems are the only ones prepared to adequately cope with natural disasters and social changes when confronted with them, prepared to overcome them, to recover and to continue developing into ‘smarter’ social systems, i.e. systems with more experiential knowledge.

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