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To cite this article: Sissel H. Jore (2020): Is Resilience a Good Concept in Terrorism Research? A Conceptual Adequacy Analysis of Terrorism Resilience, Studies in Conflict & Terrorism, DOI: [10.1080/1057610X.2020.1738681](https://doi.org/10.1080/1057610X.2020.1738681)

To link to this article: <https://doi.org/10.1080/1057610X.2020.1738681>



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Published online: 16 Mar 2020.



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## Is Resilience a Good Concept in Terrorism Research? A Conceptual Adequacy Analysis of Terrorism Resilience

Sissel H. Jore

Department for Economics, Safety and Planning, University of Stavanger, Stavanger, Norway

### ABSTRACT

Resilience has been suggested as a unifying concept in terrorism research. This article investigates the conceptual adequacy of resilience applied to terrorism. The framework for criteria for conceptual adequacy was applied on the academic literature that deals with the meaning of terrorism resilience. The conclusion of this study is that at its current state resilience serves more the role of cultural metaphor than that of a well-developed scientific concept. The almost endless definitions of resilience and lack of coherence in the descriptions of attributes is a warning sign to terrorism researchers that, if not careful with its usage, the resilience concept can end up more as a utopian goal than an actual means for countering terrorism.



### ARTICLE HISTORY

Received 24 June 2019  
Accepted 2 March 2020

At least since the 1960s, countering terrorism has been a central concern of governments and researchers. During this time, what have been seen as appropriate means to counter terrorism and how these means are described in research, as well as their associated concepts and theoretical perspectives, have changed drastically.<sup>1,2,3</sup>

Nowadays, resilience is a concept frequently occurring in Anglo-Saxon academic, policy and practical discourses on how to counter terrorism or deal with an aftermath of a terrorist attack.<sup>4,5,6</sup> The common use of the resilience concept relates to the ability of an entity, individuals, community, or system to return to normal condition or functioning after the occurrence of an event that disturbs its state.<sup>7</sup> Currently, resilience is a frequently used term for how societies, communities, organizations and individuals should structure and carry out their counterterrorism efforts on a broader level,<sup>8</sup> and resilience has even been suggested as a unifying and promising concept for the future development of the PVE literature.<sup>9</sup> Despite its current popularity in policy and its extensive application in terrorism studies, only a handful of scholars have systematically scrutinized the substantiation of resilience in regard to terrorism. A few scholars have raised criticism against the multifaceted and ambiguous meaning of resilience (see for example<sup>10,11,12</sup>) but few have endeavored to assess whether the resilience concept is a good scientific concept or not.

Scholars use and develop concepts for different purposes. These purposes often reflect a desire to address certain kind of problems or issues.<sup>13</sup> Since the resilience concept is

**CONTACT** Sissel H. Jore  [sissel.h.jore@uis.no](mailto:sissel.h.jore@uis.no)  Department for Economics, Safety and Planning, University of Stavanger, Stavanger, Norway.

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frequently used in official and public discourse, scholars have turned to the concept of resilience to describe a solution for the contemporary problem of terrorism. However, terrorist researchers should be conscious of the concepts they choose because language is the toolkit in which research is conducted and the means by which to classify the world. Scientific concepts not only describe the world, they also influence how researchers choose to categorize the phenomenon of study and what they determine to look for in a study.<sup>14</sup> For social scientists, such as terrorism researchers, most concepts will not describe observable and countable objects. On the contrary, most concepts that terrorist scholars work with are higher-order concepts, such as society, ideology, terrorism and radicalization. Terrorist scholars deal with political, context-dependent, multivalent and relational concepts, so they had better pick their concept carefully, critically and consciously because good concepts are critical to the evolution of science, which again influences terrorism policies.<sup>15</sup>

In this article, we investigate whether resilience is an adequate scientific concept in regard to terrorism. We apply the criteria of conceptual adequacy<sup>16</sup> to discuss the concept adequacy of resilience applied to terrorism in the academic literature. Subsequently, this article explores the scientific status of the concept of resilience applied to terrorism. The question we raise is: Dealing with terrorism – is resilience a promising new trajectory in terrorism research, or should terrorism scholars be careful in applying the concept because of its scientific status? The conclusion of this study is that at its current state resilience serves more the role of cultural metaphor than that of a well-developed scientific concept. The almost endless definitions and lack of coherence in the descriptions of attributes is a warning signs to terrorism researchers that, if not careful with its usage, the resilience concept can end up more as a utopian goal than an actual means for countering terrorism.

## **Methodological Approach**

Concepts are the lifeblood of our common endeavor as social scientists to understand, explain and engage with the social world.<sup>17</sup> Within the social sciences, there has been an increased focus on the role of language in the process of constructing meaningful realities. These approaches acknowledge that language does not only describe the world; language is also built up as a system and does not correspond to the reality “out there”.<sup>18</sup> The meaning people attach to words is not inherent in them but is a result of social conventions whereby people connect certain meanings with certain words. Language also gives meaning to the world and can create new realities.<sup>19</sup> Consequently, it is important to reflect upon the concepts we chose as scientists and discuss whether the concepts we use are good scientist concepts.

Despite the acknowledgement of the importance of language in social science, the discussion on what makes a scientific concept good has received far less attention among scholars. Although concept formation has received some attention in recent years, (see for example<sup>20,21,22,23</sup>), this attention is modest when we consider how much concepts structure our collective theoretical and empirical agenda. According to Ansell<sup>24</sup> this lack of reflection arises because there is a tendency to narrow the issue of concept formation to clear definitions, operationalization and measurement, which

**Table 1.** Criteria of conceptual adequacy based on Gerring (1999) and (Ansell, 2019).

Criteria	Description
<i>Origins</i>	<i>Understanding the messy histories of concepts</i>
<i>Social- historical context</i>	<i>Investigate how a concept is anchored in different concerns and discourses</i>
<i>Parsimony</i>	<i>How concise is the term and its list of defining attributes?</i>
<i>Coherence</i>	<i>How internally consistent are the instances and attributes?</i>
<i>Differentiation</i>	<i>How differentiated are the instances and attributes from similar concepts?</i>
<i>Depth</i>	<i>How many accompanying properties are shared by the instances under definition?</i>
<i>Familiarity</i>	<i>How familiar is the concept to different audiences?</i>
<i>Resonance</i>	<i>Does the chosen term resonate?</i>
<i>Theoretical Utility</i>	<i>How useful is the concept within a wider field of inferences?</i>
<i>Field Utility</i>	<i>How useful is the concept within a field of related instances and attributes?</i>
<i>Entailments</i>	<i>Considering the entailments of the concept.</i>

in turn reflects the priority that are given in the social sciences to focus on causal explanations.

At first glance, resilience sounds like an adequate and promising counterterrorism goal; Who does not want to be resilient to the devastating threat of terrorism? Yet, positive connotations and a widespread application do not mean that the resilience concept is an adequate scientific concept. For a concept to be a good scientific concept, criteria other than popularity and expansion should be applied. Although some scholars have discussed criteria for concept formation in social science, few scholars have developed clear assessment criteria for scientific concepts. One scholar that has developed a framework for assessing scientific concepts is Gerring.<sup>25</sup> Thus, this study builds on Gerring's framework in order to assess the conceptual adequacy of the resilience concept in regard to terrorism. According to Gerring, adequacy in scientific concept formation cannot be reduced to clarity, to empirical or theoretical relevance, to a set of rules, or to the methodology particular to a given study. Rather, he argues that conceptual adequacy should be perceived as an attempt to respond to a standard set of criteria. Ansell builds on Gerring and claims that in addition to Gerring's criteria it is important to also consider the messy history of a concept, reflect upon how concepts are anchored in different concerns, and boundary work. Thus, we added these criteria to Gerring's framework for criteria of conceptual adequacy because these criteria adds contextual reflections to Gerring's framework which is important in order to assess whether resilience is a good concept in terrorism research (Table 1).

The data on which this article is based comprises academic publications that deal with the meaning of resilience in general and terrorism resilience in particular. These scientific publications consist of academic journal articles and books retrieved from search engines such as Google Scholar, Web of Science and Science Direct. We searched for academic publications from any discipline, written in English that dealt with either the meaning of the concept of terrorism resilience or used the concept of resilience in regard to terrorism. The search resulted in 109 academic publications. Although this article to some extent reviews the academic literature on terrorism resilience, its overall aim is not to systematically outline the state of the art of the literature on terrorism resilience but to assess the concept adequacy of resilience with regard to terrorism and to discuss whether this is a promising concept for developing the field of terrorism research.

## Conceptual Adequacy of Resilience

### *The Origins of Resilience as an Academic Concept*

According to Ansell, all concepts have histories and often messy ones. Concepts like resilience are not found in nature in some objective form. Rather they grow out of specific debates and discourses. Understanding how the messy history has shaped the current understanding of the resilience concept is the first step toward assess the adequacy of the concept.

Despite its current popularity, resilience is not a new concept. Resilience has been used as a term to define systemic capacity to overcome disruptions, for at least 2000 years.<sup>26</sup> Resilience originally stemmed from *resilire* and *resilio*, which in Latin mean “bounce” or “jump back.”<sup>27</sup> In the mid-1500s, the term passed into Middle French (*résiler*), where it came to mean “to retract” or “to cancel,” and then it moved into English as the verb *resile*, meaning to “return to a former position.”<sup>28</sup>

As an academic term, resilience has been used for decades in ecology, physics and psychology.<sup>29</sup> In ecology, resilience was introduced as a scientific term by Holling,<sup>30</sup> who used the word to describe the ability of an ecosystem to transform in response to often unpredictable external disturbance without losing its core identity or functions. In physics, resilience describes the ability of a material or substance to resist or to “bounce back” to its original form.<sup>31,32</sup> In physics, resilience implies that a system has one equilibrium. Ecological resilience, on the contrary, proposes that a system has multiple equilibria and can transform from one relatively stable state to another.<sup>33,34</sup> From both perspectives, resilience is distinguished from stability, since resilience refers to the capacity to adapt and transform rather than to reach a new stable state.<sup>35</sup>

Psychologists have employed the concept to explain why some individuals are able to withstand significant chronic and acute stressors without developing mental health problems, ascribing resilience at the individual level to stable personality characteristics.<sup>36</sup> Although newer approaches in psychology and social work focus on the relationship between an individual and his/her social environment, the traditional psychological understanding of resilience regards it as a stable individual personality trait, in contrast to the ecological and engineering interpretations that differentiate resilience from stability.

Given the different meaning of resilience in its disciplines of origins, the resilience concept carried with it conceptual pluralism and ambiguities as it spread to multiple other disciplines. Over time, resilience became a popular concept in a number of disciplines, including organization sciences, describing organizations’ ability to prepare for unexpected events,<sup>37,38,39</sup> and, more recently, resilience engineering, describing organizations’ and critical infrastructures’ ability to cope with the inherent complexities of modern sociotechnical systems (e.g.<sup>40,41</sup>). In engineering, resilience describe the strength and ductility of steel beams;<sup>42</sup> in disaster research and social work, resilience describe the ability to cope with crimes and crisis.<sup>43,44</sup> Additionally, multiple social science disciplines have linked resilience to empowerment and social capital, stating that resilience holds special interest for marginalized and disaster-affected individuals and communities.<sup>45</sup> Resilience described as empowerment is also found in criminology, where some scholars have argued that resilience can improve current understandings about the impact of crime on marginalized groups and emphasize the capacity not merely to

survive in the face of adversity but to triumph over it and successfully recover.<sup>46,47</sup> In social work, criminology and psychology, the resilience concept has also been utilized to conceptualize resistance or disruption of criminal behavior.<sup>48,49</sup>

Consequently, the concept of resilience clearly meant different things in different disciplines and as terrorism became a phenomenon that multiple disciplines dealt with the ambiguities of resilience spread to the disciplines that today deal with the topic of terrorism.

### ***Social-Historical Context of Terrorism Resilience***

According to Ansell<sup>50</sup> concepts are often anchored in different social realities or “discourses,” which typically go unstated but subtly shape how scholars understand the meaning and purpose of the concept. Thus, there is a need to reflect upon the historical era of counterterrorism that laid the grounds for the application of the resilience concept as an extensive used academic concept.

The widespread usage of the resilience concept in current terrorism research is not based on theoretical or methodological breakthroughs that would signal the need for paradigm shifts in the sciences involved. Consequently, there is every reason to believe that the concept of resilience reflects a desire to address certain kinds of threat perception of terrorism and accompanying solutions.

Before the terrorist attacks in the U.S. on 11 September 2001 (9/11), resilience was a term seldom found in terrorism policy or research. However, the concept had previously been used in Israel describing how victims of terrorism and communities could develop coping strategies for living and dealing with terrorism.<sup>51</sup> In the aftermath of 9/11, national authorities in the U.S. and multiple other countries had to deal with widespread public concern regarding the possibility of international terrorists attacking targets in Western countries. Multiple terrorist threats and attacks from what would be referred to as homegrown terrorists gained massive media coverage in the years following this event and raised fear of a growing threat of terrorism. During the decade following 9/11, counterterrorism went from emphasizing external threats to managing radicalized individuals domestically, from primarily operating via security measures and surveillance to stressing more local and soft counterterrorism measures, and from seeking to identify people at risk of being radicalized to empowering people to become immunized against radicalization.<sup>52</sup> Nowadays, local communities, organizations and individuals are responsible for preventing radicalization, crisis management and protecting vulnerable places and objects from terrorism because terrorism is seen as an omnipresent threat.<sup>53</sup> This perception of the threat and the new structuring of counterterrorism gave momentum to the birth of a range of counterterrorism policies and the development of what would become specific forms of resilience policies. Therefore, resilience became an incorporated and discussed part of the academic terrorism literature. Consequently, the resilience concept has been applied to multiple scales as an idea of how to handle terrorism on multiple levels. The introduction of the resilience concept applied to terrorism was thus related to an altered threat perception and an associated changed counterterrorism regime. The resilience concept have been transferred to terrorism research in parallel with the devolution and diffusion of counterterrorism

responsibility that has taken place since 9/11. The current popularity of the resilient concept in the study of terrorism is clearly connected with the perception of terrorism as a threat and how this threat should be dealt with.

### **Parsimony**

According to Gerring,<sup>54</sup> good concepts do not have endless definitions. It should be possible to understand the meaning of the concept without listing a half-dozen attributes.

The idea that systems or social units have a property called ‘resilience’ has emerged and grown extremely popular in the last decade in many disciplines. The idea has been examined from multiple disciplinary perspectives, and some scholars claim that resilience has become the favored solutions for complex problems.<sup>55,56,57</sup> Subsequently, some scholars have tried to make a universal consensus definition of resilience. These scholars assume that there is a single objective meaning to the term, if only it could be adequately defined and specified. The general definition of resilience in terrorism studies and elsewhere is that resilience describes the way in which a system or a social unit is able to resist or to ‘bounce back’ after an external or internal shock. Resilience enables the system or the social unit either to return to its original status, or to recover from the initial shock and rebuild itself stronger than before. Additionally, resilience building is usually seen as constructive and positive.<sup>58</sup> However, the universal and general definitions are only applicable to specific research areas of disciplines.<sup>59</sup> Thus, although there is a certain core meaning to the term, the ambiguous meaning of resilience entails that agreeing on a consensus definition of resilience is not a realistic project.

Multiple literature reviews of the resilience concept have stated that, unlike good concepts, resilience has almost endless definitions. According to Demchak, Boin, and Comfort,<sup>60</sup> there are three main differences in the ways in which the concept of resilience is used in the academic literature. Firstly, scholars have different views on what they call “the moment of resilience”, referring to whether resilience is a phenomenon that appears after or before the onset of, during or after a disturbance or a crisis. Secondly, scholars have different perspectives on the severity of the disturbance in order to activate resilience. In some disciplines, resilience is the capacity to deal with rare but devastating events, while in other disciplines resilience is the capacity to deal with all types of routine disturbances. Thirdly, scholars have different descriptions of the state of return after a disturbance. Some scholars describe resilience as the ability of a person or a system to return to its precrisis state, while others designate resilience as the ability to make the basic structures function again. Additionally, other scholars describe resilience as the ability to emerge stronger and better after a crisis.

Multiinterpretability and conceptual plurality is also found in the literature that deals with terrorism resilience. The literature this study is based on describes terrorism resilience in five different ways. These interpretations of resilience have different implications for not only what it means to become resilient but also for what are considered legitimate countermeasures.

The first interpretation of resilience in regard to terrorism is to see resilience as the ability to resist and cope with adversities. In the years following 9/11, counterterrorism

policies turned to more proactive and preemptive strategies, focusing on securing high-risk targets such as mass transportation, national embassies, government buildings and dense city areas. Resilience from this approach is a form of coping with adversity in an uncertain world,<sup>61,62</sup> corresponding to maintaining a stable system or the equilibrium of society. Resilience is, for example, defined as “the ability to detect, prevent and, if necessary, handle disruptive challenges.”<sup>63</sup> From this perspective, resilience means to prevent terrorism from happening and reduce vulnerabilities. Resilience is a result of top-down and macro planning, where counterterrorism is the responsibility of the traditional security agencies but on a more local scale than before 9/11. Accordingly, this form of resilience resembles the psychological and engineering view of resilience, which sees it as the ability to resist or bounce back to its original state when something happens. This interpretation is typically used in relation to the protection of vulnerable urban places or critical objects aiming to prevent terrorism through the build environment. This conceptualization of resilience has paved the way for an increased amount of physical security measures and surveillance technologies.

The second interpretation of resilience in regard to terrorism is to cope with and adapt to terrorism. While the first resilience interpretation focuses on macro planning and is inherently reactive, materially and territorial focused, the second resilience interpretation’s logic moves beyond the ability to resist shock and restore equilibrium, to focus instead on the ability of businesses, governments, communities and individuals to self-organize terrorism prevention. This approach to resilience describes a new form of equilibrium, where the civil population is held in constant fear and the new equilibrium is that terrorism is the new normal that everyone needs to be prepared for. This interpretation of resilience presupposes that individuals live with uncertainty and expect that terrorism will occur. Resilient individuals or local actors are those who expect the unexpected and are capable of responding to the threats.<sup>64</sup> Resilience is an ability or a state which is constantly transforming, and thus this understanding of resilience aligns with Holling’s description of resilience in ecology, where the aim is not to reach a new stable state but to constantly adapt and find new forms of equilibria.<sup>65</sup> This form of resilience has manifested itself in an increased focus on emergency preparedness on a local level.

The third interpretation of terrorism resilience is that resilience is a standardized process of management. This deduction of resilience is typically used for describing how organizations and critical infrastructures can be prepared for dealing with the risk of terrorism. Resilience from this perspective means to have the ability or capacity to absorb the shock, adapt to the new reality and transform, in order to function either as before the crisis or in a superior manner. This perspective is described as an optimistic approach, allowing local actors to respond to crises as opposed to simply being subjects exposed to threats.<sup>66</sup> Essential in this conceptualization of resilience is the belief that it is possible to manage risks, such as terrorism, through organizational procedures and decision-making, where the aim is to find acceptable solutions to a given risk problem. As such, the management perspective builds on the risk management culture that dominated contemporary society. Thus, terrorism is conceptualized as a manageable, predictable and measurable phenomenon and, subsequently, a risk that could be minimized with the right prevention measures.<sup>67</sup> This interpretation of resilience also aligns with Holling’s description of resilience as an ability to constantly adapt and find new forms



of equilibria.”<sup>68,69,70</sup> This deduction of resilience has led to massive focus on organizational preparedness and critical infrastructures protection programs.

Fourth, resilience is not only the ability to bounce back from a terrorist attack but also to bounce forwards. The literature within disaster management, social work and psychology that deals with community resilience and victims of terrorism has taken this positive element of resilience even further, describing resilience as empowerment, social capital and a new improved state.<sup>71,72</sup> This literature is associated with the traditional psychological understanding, linking resilience to the ability to resist and overcome adversity. However, the psychological concept of resilience is no longer associated with pathology and therapy. Rather, this “posttherapeutic” understanding of resilience aims to create resilient individuals who are self-aware, problem-solving, autonomous, optimistic, physically and mentally fit, and rooted in the community.<sup>73</sup> Thus, the posttherapeutic view on resilience aligns with the traditional psychological perspective to resilience. This interpretation of resilience is exemplified by the massive programs initiated in the U.S., Israel and other countries to build an inner strength to handle terrorism.

Fifth, terrorism resilience is described as an individual’s ability to refrain from extreme ideas. This approach to terrorism conceptualizes resilience as “the relation between terrorism and the social factors that can facilitate, enhance or block the terrorism threat”<sup>74</sup> or as a form of psychological robustness that makes potential terrorists refrain from radicalized ideas and the willingness to use violence as a political means. One prominent theme in this literature is that violent extremism can be prevented by developing resilience as a form of psychological capacity in individuals that prevents them from being drawn toward violent extremist ideologies or groups.<sup>75</sup> According to this perspective, resilience is about sharing the same political attitudes as the mainstream community.<sup>76</sup> The notion that radicalization is caused by social problems, such as alienation and disaffection, has paved the way for applying the empowerment perspective, associated with criminology, psychology, disaster management and social work, to the radicalization domain. Thus, by empowering the social and political agency of young people, terrorism can be prevented.<sup>77</sup> This view on resilience aligns with how resilience traditionally was conceptualized in psychology. This resilience approach has resulted in multiple local programs aiming to make robust individuals that thrive in their local communities putting local police, teachers, social workers and youth workers in the center of terrorism prevention.

To summarize, these five different interpretations of terrorism resilience in the academic literature infer that resilience in regard to terrorism is not unitary, uniform or unifying and they legitimize different forms of counterterrorism measures.

## **Coherence**

The most important criterion of a good concept, according to Gerring,<sup>78</sup> is its internal coherence—the sense in which the attributes that define the concept, as well as the characteristics that actually characterize the phenomena in question, “belong” to one another.

Given the diverse conceptualizations of resilience and its ambiguities, the resilience concept provides a particularly glaring case of inconsistency. Terrorism resilience means

multiple things: to accept the threat and live with fear, to protect possible terrorist targets and infrastructure, to be prepared and to cope with terrorism, to bounce forward to a new and improved state of resilience and it is also the key to hinder potential terrorists from develop extreme attitudes and become radicalized.

Additionally, the concept is used on multiple scales. In the literature his study is based on, the resilience concept is referring to nations, cities, communities, organizations, businesses, urban places, critical infrastructure, the general population, potential terrorists and victims of terrorism. Consequently, the resilience concept is referring to multiple different objects on a variety of scales. Only recently has research begun to examine the associations between different levels of resilience.<sup>79,80,81</sup> This research conclude that the different levels of resilience are all positively correlated with each other, but that their low common variance also emphasized their distinctiveness. As such, there is reason to question whether all these attributes and scales of terrorism resilience belong together in the same scientific concepts, especially if the aim of the research is to measure resilience or to describe how to become resilient. The links and the associations between the levels of resilience is not supported by empirical evidence.<sup>82,83</sup>

Despite of the plurality and inconsistency of the resilience concept in the academic literature, the idea of resilience makes sense because counterterrorism nowadays has become a multiscale responsibility. Consequently, on an overall level, all these different interpretations of terrorism resilience are meaningful because together they constitute a coherent idea of a resilient society. Although some of the understandings of resilience do not necessarily bear an obvious relationship to each other, the attributes of resilience are not entirely mutely exclusive. Thus, the idea of resilience seems like an intelligible idea, although it actually consists of multiple forms of resilience, rather than one form of resilience.

### ***Differentiation***

A good scientific concept must be sufficiently bounded. Useful definitions define a term against related terms, telling us not only what a concept is but also what it is not.<sup>84</sup>

The diverse meanings of resilience entail that the concept has several neighboring terms. In many disciplines, resilience replaced other popular concepts describing the new way to deal with terrorism and adversaries. In the risk and crisis management literature, for example, the turn to resilience as a management strategy signals a recognition of the fallibility of previous risk and crisis management approaches to prepare for risks with low probabilities and high consequences. Resilience offers a way to deal with the new types of risks, such as terrorism, and a faltering belief in the possibility of controlling an uncertain world and preventing crises from happening if only the right mindset and procedures are in place.<sup>85</sup> In security studies, resilience is described as the new way to retrieve security. According to Virta and Branders security is closely linked to resilience: “external and internal security, national security, counterterrorism, organized crime, crime prevention, and emergency management, risk governance, etc. Its main means are prevention, capacity-building and cooperation, and its main objective is the creation of a resilient society, resilient communities and resilient citizens.”<sup>86</sup> In disaster research, resilience replaced the concept of sustainable development.<sup>87</sup> The

resilience concept moved the focus to how local communities can self-organize in the face of disasters and has connected the resilience term to empowerment and social capital. In radicalization research, resilience has replaced the focus on finding individuals that could constitute a threat with a focus on building an internal robustness to prevent vulnerable individuals from adopting radical ideas.

In all these examples, resilience substituted for previous scientific concepts because inherent in the resilience concept lies the positive connotation and a promise of handling the threat of terrorism in a new way. Despite this, few attempts have been made to separate resilience from the concepts that resilience replaced. Indeed, resilience cannot be readily separated out from these concepts, with capacity for resilience frequently being measured as a feature of risk, vulnerability, security, empowerment and well-being.<sup>88,89</sup> In fact, the resilience concept often includes the concept that it has substituted in its list of attributes and, consequently, resilience is framed as something new and better than many of its boundary concepts. Thus, resilience is a poorly bounded concept that has definitional borders which overlap neighboring concepts.

However, the most worrying aspect of the differentiation criteria and resilience is that the academic literature totally fails to describe what it means not to be resilient. According to Arendt, “Useful definitions define a term against related terms, telling us not only what a concept is, but also what it is not.”<sup>90</sup> When the literature on terrorism resilience neither differentiates resilience from boundary concepts nor describes what it means to not be resilient, operationalization of the resilience concept becomes impossible. Additionally, it becomes difficult to carry out research that can falsify or test what it actually means to be resilient. This implies that the resilience concept functions more as a desired goal and an umbrella concept than a good empirical concept or a realistic goal.

### **Depth**

The deeper or richer a concept, the more convincing the claim that it defines a class of common entities, which are therefore deserving of being called by a single name. Resilience appears to be both a stretchy and a pervasive concept, with multiple definitions and, consequently, the concept should rather be described as shallow than deep.<sup>91</sup>

The resilience concept is applied to nations, societies, communities, municipalities, critical infrastructure, buildings, individuals, businesses, the city, victims of terrorism, terrorists, potential terrorists and the whole population. Consequently, it seems that the current understanding of resilience is that almost everything should be resilient. If all these social, physical and technical units can be resilient it seems that resilience is applied to almost everything and thus the concept is rendered meaningless. The resilience concept hence becomes a concept that describes almost everything related to terrorism, and thus it describes nothing.

### **Familiarity**

According to Gerring,<sup>92</sup> the degree to which a new concept makes sense or is intuitively clear depends critically upon the degree to which it conforms, or clashes, with established usage in everyday language and within a specialized language community. Although

resilience gained popularity in terrorism studies after 9\11, and then gain momentum in parallel with the radicalization concept, it is not a new concept; resilience has currently become the favored solution to a range of policy problems, especially complex and multi-scale problems.<sup>93</sup> As such, resilience can be recognized as a familiar concept. It is a widely used concept for lay people, in policy documents and in various disciplines. It has a long history of application as a scientific concept, although in terrorism research it has a much shorter history of application than in its originating disciplines.

## Resonance

Despite its ambiguous content, the commonality of all the applications of the concept is that resilience describes something positive and a desired state. Already, 16 years ago, Klein, Nicholls, and Thomalla<sup>94</sup> claimed that: “Resilience has become an umbrella concept for a range of system attributes that are deemed desirable”. Multiple literature reviews published in various disciplines in recent years have reached similar conclusions.<sup>95,96</sup> These positive connotations have followed the term as it has spread to terrorism research, where the academic literature on terrorism resilience is associated with positive connotations, such as coping with terrorist attacks, countering radicalization, empowerment and social capital.

Resilience is without doubt a concept accompanied by positive connotations and, consequently, it resonates well. However, the positive connotation of terrorism resilience is also a difficult element for the concept from a scientific point of view. Resilience is not a neutral scientific concept but a concept that might serve more as a cultural metaphor or an ideological concept because its positive connotations make it almost impossible to claim that resilience is not a good solution to the contemporary threat of terrorism.<sup>97</sup>

Another problematic aspect of the positive connotations of resilience is that resilience as a counterterrorism strategy, like all forms of counterterrorism strategies, entails both positive and negative implications. As such, there are likely also downsides of resilience, which to date are virtually unexplored.<sup>98</sup> Moreover, little research has focused on how many and which kind of resilient designs and practices are compatible with the aim of preventing and coping with terrorism.<sup>99</sup>

After going through the academic literature on terrorism resilience, a striking element is that the resilience concept clearly is predominantly applied to systems or social units that we want to protect from terrorism, such as individuals, communities, cities, organizations and society. The problem with assuming that resilience is universally beneficial and only applicable to the social units we want to protect is that undesirable states, systems, institutions or terrorist groups can also be highly resilient.<sup>100</sup> Most people will agree that terrorist groups such as the Islamic State or many dictatorships are highly resilient, although most of us will not consider them a desired state.

## Theoretical Utility

The goal of a scientific concept is to aid in the formulation of theories because concepts are the building blocks of all theoretical structures.<sup>101</sup> As a relatively new and

interdisciplinary field, terrorism research applies few grand theories or classificatory frameworks, compared to the more traditional social sciences. A classification framework aims to carve up the universe into comprehensive, mutually exclusive and hierarchical categories. Within such a schema, a given concept derives much of its utility from its position within this broader array of terms. There are scientific disciplines that apply the resilience concept, attempting to make classificatory frameworks, e.g. Resilience engineering, organizational sciences and disaster management. In all these examples, resilience is something that can be achieved by following formalized procedures describing how to become resilient. As this approach is highly normative, several quantitative, semi-quantitative and qualitative approaches have been proposed and deployed to measure resilience at local, national and international levels,<sup>102</sup> and many of these resilience procedures have become standardized (see for example<sup>103,104</sup>). This trend to standardize procedures for resilience is also found in disaster and community resilience.<sup>105</sup> However, most of the academic publications that attempt to make a grand theory of resilience deal with the management of uncertainties in today's complex and interconnected world and do not deal with terrorism in particular.

The introduction of resilience into terrorism research was probably twofold. Firstly, because several governments, such as in the U.K.,<sup>106</sup> the U.S.<sup>107</sup> and Australia,<sup>108</sup> proposed resilience as an overall goal or part of their official terrorism policies, resilience became a topic in terrorism research. Secondly, since terrorism researchers were aiming to describe the ability to cope adequately with terrorism in an uncertain threat landscape and to describe the ability of individuals to refrain from radicalized ideas, terrorist scholars picked the concept of resilience because the concept was already familiar to them from other disciplines and through everyday English language. Consequently, there was a need to describe this ability and resilience became the key term for understanding these issues. The problem with arriving at the resilience concept for describing this ability was that they picked a concept that already carried with it ambiguous meaning.

### **Field Utility**

As mentioned in the previous paragraph, an important factor behind the introduction of resilience in terrorism research was probably that resilience appeared as a policy concept related to how to deal with terrorism. Most concepts in social science are not exclusively theoretical but become an object of research because they are popular within a certain period. Terrorism research, for example, gained a massive boost after 9/11 because there was a societal need for looking into how this attack could have happened and how to prevent such attacks from happening in the future.<sup>109</sup> Consequently, there is a practical need to investigate what resilience is and how it can be achieved because this concept is not exclusively theoretical but a concept that guides practitioners in their counterterrorism efforts. Regardless of the scientific status of the resilience concept, practitioners and politicians beg to get an answer to the central question: How do we become terrorism resilient? However, because the concept of resilience has been defined, operationalized and applied differently across multiple levels of analysis (e.g.<sup>110,111,112</sup>), its usefulness as a scholarly construct has been stymied.<sup>113</sup> Moreover, the study of resilience is fragmented and there is general

agreement that, although theory surrounding resilience has proliferated, empirical studies have lagged in many disciplines.<sup>114, 115, 116</sup>

One problem with identifying and measuring resilience is that resilience may be seen as a “dynamic nonevent,”<sup>117</sup> it is both dynamic and invisible. It is dynamic in the sense that it is an ongoing condition. It is invisible in the sense that you cannot measure when an individual does not become radicalized or when a terrorist attack does not occur. This means that identifying the state of resilience in a society, organization, individual or technical system is not only challenging, it might also be almost impossible.

## Entailments

To assess whether a concept is a good concept a researcher should also consider the entailments of a concept, that is, the critical dimensions and implications of the concept. There are several entailments of the resilience concept in regard to terrorism that have been criticized in the academic literature.

First, the majority of the literature that criticizes the resilience concept claims that resilience is connected to a neoliberal ideology where individuals and local communities constitute the collective resistance to terrorism and thus the responsibility of the state to prevent and tackle terrorist attacks has been removed.<sup>118, 119, 120</sup> The image of an increasingly complex and uncertain world, in which the demand for security is increasing, whilst simultaneously the capability of the nation-states to manage it is being challenged, creates the political landscape that has paved the way for resilience policies.<sup>121</sup> Accordingly, the idea of resilience is timely in an era where governments have realized that traditional counterterrorism methods are insufficient and the focus is moved to more softer and local strategies. Consequently, resilience offers a positive solution for how to deal with the new threat landscape, and, by framing the new role of local actors in counterterrorism through the positive lens of resilience local actors are much more inclined to carry out their counterterrorism efforts than if this was framed through the lens of surveillance and reporting.<sup>122</sup>

Additionally, the prism of resilience with its positive connotations has turned counterterrorism measures into something positive. Embarked in the resilience concept lays a promise that by empowering the social and political agency of young people, terrorism can be prevented.<sup>123</sup> This is probably a reason why the concept of resilience is so widespread in the radicalization literature; it offers a view on prevention that recognizes the potential and agency of individuals and communities. Additionally, by connecting the resilience concept to social capital and empowerment, the emphasis shifts from the surveillance of suspects to a focus on building strengths rather than deficits. This has led to that counterterrorism measures no longer are seen as controversial but as something positive.

The idea of resilience has also been criticized for normalizing and depoliticizing counterterrorist measures by giving powers over them to seemingly nonpolitical actors such as teachers and social workers. This has led to a lack of accountability and a diffusion of counter terrorism measures.<sup>124,125</sup> Additionally, when the focus shift to vulnerabilities instead of political factors this lead to a focus on explanatory factors on an individual and local level and thus political factors and factors on the international level are overlooked.

Consequently, this resilience perspective advocates adaptation within existing structures rather than structural change or political aspects of resilience.<sup>126,127,128</sup>

## Discussions

It is important to keep in mind that the criteria for conceptual adequacy is an ideal framework (Table 1). No concept in social science will be able to fulfill all these criteria. The criteria should rather be seen as a matter of degree and not absolute criteria. However, after applying the framework for conceptual goodness to the resilience concept, it is obvious that the resilience concept, as it is currently used in the academic literature, scores low on concept adequacy. The examination of the concept adequacy of resilience applied to terrorism reveals that there is a need for terrorism scholars to be conscious of the ambiguous and diverse meanings of the concept. The almost endless definitions and lack of coherence in the descriptions of attributes is a warning sign to terrorism researchers that, if not careful with its usage, the resilience concept can end up more as a utopian goal than an actual means for countering terrorism. Currently, the scientific status of the concept is so poor that terrorist researchers should be careful in using the term.

It is widely assumed that more resilience would be beneficial to meet the current threat of terrorism. However, for this assumption to be valid and useful, one needs to have an understanding and clear definition of resilience, including the factors by which it is determined, how it can be measured and, most importantly, how it can be maintained and enhanced. At the moment, it is not really possible to say whether resilience is a desired trajectory in counterterrorism because the lack of common understanding and operationalization implies that the answer to this question will depend on how you define resilience.

Given the fact that the resilience concept entered the terrorism domain with ambiguous baggage, and that terrorism research in itself is an interdisciplinary research area, a consensus on a universal definition of resilience is probably unrealistic. Perhaps, the resilience concept functions best as a boundary concept;<sup>129,130</sup> Because the resilience concept is vague and abstract, practitioners and researchers from different fields can work together without first having to settle disagreements about the exact meaning of the term.<sup>131</sup> However, this does not necessarily mean that terrorist researchers should totally reject the concept of resilience. Terrorist scholars already deal with the concept of terrorism, which is also a problematic scientific concept, but few researchers nowadays claim that terrorism is a concept that researchers should abandon or that terrorism is something you will recognize when you see it. In parallel with the terrorism concept, resilience is also a concept with multiple interpretations, whose content has transformed with changing discourses on what terrorism is and how it should be prevented. The goal should be for terrorist scholars to be aware of what form of resilience they are studying. Reaching a consensus on the concept itself if thus not a means in itself, but, if the concept is to enhance our understanding of terrorism research as a field, there is a need for researchers to investigate the multilevel and multistage nature of resilience. This is an essential foundation to understand what we know about resilience, if the resilience concept is to be developed as a scientific concept in terrorism research.

The resilience concept has prompted a new way of conceptualizing counterterrorism. It removes the focus away from top-down prevention measures and toward how to build strengths in individuals, communities and organizations vulnerable to terrorism. Since top-down approaches nowadays are viewed as insufficient to deal with the contemporary terrorism threat, there is a need for a conceptual apparatus that helps researchers capture these processes. The existing body of knowledge has undoubtedly contributed to a better understanding of the ongoing processes of counterterrorism, but a more systematic study of the different forms of resilience in counterterrorism and the relationship between them is needed, if the resilience concept is to help move the study of terrorism forward.

## Conclusions

Resilience has become a central pillar in contemporary terrorism policies, and the concept is frequently used in terrorism research. Despite this, the concept has gained far less attention in terrorist research than it has in other disciplines. This article investigates whether resilience is a promising new trajectory in terrorism research, or whether terrorism scholars should be careful when applying the concept because of its scientific status. To answer this question, we applied criteria for conceptual adequacy to the academic literature that deals with the meaning of resilience and terrorism resilience (Table 1).

We conclude that, because of the poor scientific status of the resilience concept in regard to terrorism, the literature currently offers little clarification on whether a resilience approach to terrorism is possible, desirable and beneficial. Given the diverse meanings of the concept of resilience in regard to terrorism, and its extremely positive connotations, there is every reason to claim that the resilience concept in its current state serves more the role of cultural metaphor or utopian dream than of a scientific concept that can lead to a safer society. Since the resilience concept currently is applied to so many different objects and scales, researchers should be aware that there is no such thing as a universal definition of resilience, if only it can be properly described. On the contrary, terrorist researchers should acknowledge that there are many forms of resilience; perhaps some of them are beneficial to contributing to a safer society, while others are not. A more systematic study of the different forms of resilience in counterterrorism and the relationship between them is needed, if the resilience concept is to help move the study of terrorism forward. The almost endless definitions and lack of coherence in the descriptions of attributes is a warning sign to terrorism researchers that, if not careful with its usage, the resilience concept can end up more as a utopian goal than an actual means for countering terrorism.

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## Disclosure statement

No potential conflict of interest was reported by the author(s).