

Resilience research and policy/practice discourse in health, social, behavioral, and environmental sciences over the last ten years.

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Abstract

Background: Resilience research has gained increased scientific interest and political currency over the last ten years.

Objective: To set this volume in the wider context of scholarly debate conducted in previous special theme issue and/or special section publications of refereed journals on resilience and related concepts (1998-2008).

Method: Peer reviewed journals of health, social, behavioral, and environmental sciences were searched systematically for articles on resilience and/or related themes published as a set. Non-English language publications were included, while those involving non-human subjects were excluded.

Results: A total of fifteen journal special issues and/or special sections (including a debate and a roundtable discussion) on resilience and/or related themes were retrieved and examined with the aim of teasing out salient points of direct relevance to African social policy and health care systems. Viewed chronologically, this series of public discussions and debates charts a progressive paradigm shift from the pathogenic perspectives on risk and vulnerability to a clear turn of attention to health-centered approaches to building resilience to disasters and preventing vulnerability to disease, social dysfunction, human and environmental resource depletion.

Conclusion: Resilience is a dynamic and multi-dimensional process of adaptation to adverse and/or turbulent changes in human, institutional, and ecological systems across scales, and thus requires a composite, multi-faceted *Resilience Index (RI)*, in order to be meaningfully gauged. Collaborative links between interdisciplinary research institutions, policy makers and practitioners involved in promoting sustainable social and health care systems are called for, particularly in Africa.

Key words: Adaptive learning, Disaster mitigation, Human resilience, Resilience Index, Social-ecological resilience, sustainability of human and natural resource management systems.

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Introduction

An overview of recent developments and current direction of international research and policy discourse on resilience is presented here with the aim of setting this volume in the wider context of ongoing discussion and debate among scholars, policy makers, and practitioners.

Method

Multiple systematic searches were conducted to identify peer-reviewed journal articles published as sets belonging to special theme issue volumes and/or special sections of journal volumes on resilience and related terms in the human, social, behavioral, and environmental sciences. No limits were set on languages or dates of publication, but those reporting on non-human subjects were excluded.

Results and Discussion

Fifteen journal special issues and/or special sections on resilience and/or related themes published over the last ten years were found and reviewed with a view to summarizing their salient points of direct relevance to African health care and social systems. All of these discussions and debates were conducted in the English language.¹⁻¹⁵ The analysis yielded a rich body of knowledge and shared insights among seemingly unrelated scholars and practitioners who have considered the concept of resilience from a wide range of perspectives, often with divergent aims and objectives stemming from their own individual/independent research and/or policy/practice priorities.

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Table: Public discussion and debate in journal special issue volumes or sections on resilience and related themes (1998-2008)

Journal (year) Title, Volume (pages) – Editor/s and Salient points of direct relevance to current African health research, policy, and practice (Ref)

1. *Journal of Social Issues* (1998) Special Issue. Thriving: Broadening the Paradigm Beyond Illness to Health. Vol. 54 (237-425) – Issue Editors; Jeannette Ickovics and Crystal Park. Notes from the editors and 12 articles – three of which are most relevant.
 - o Qualitative investigation and analysis enable researchers to hear and understand respondents' processes of meaning-making in context (Massey *et al.*);
 - o Posttraumatic growth may be accompanied by "increased well-being, but distress and growth may also coexist. Degree of change produced by clinical intervention may be limited in scope, but there clearly are some ways in which the clinician may make growth more likely for the client." Growth is beyond recovery from trauma; positive change occurring in several domains and may be largely "phenomenal" (Calhoun & Tedeschi);
 - o Armenia (a small nation that survived against the odds) embodies resilience at the level of individual, nuclear and extended family, community and state on account of its unique cultural and geo-historical characteristics. Child-rearing practices which foster pride in ethnic identity, social cohesion and social support promote and sustain resilience among Armenians at home and in the Diaspora (Karakashian).
2. *Journal of Social and Clinical Psychology* (2000) Special Issue. Classical Sources of Human Strength: Revisiting an old home and Building a New One. Vol. 19 (1-160) – Guest Editors: Michael McCullough and C. Rick Snyder. Editorial introductory and post-script pieces, and 8 articles – two of which are most relevant.
 - o Hope – goals, pathway and agency thoughts – a measurably positive correlate of health in those with life-threatening disease (Snyder);
 - o Self-control (the ability to alter the self's own states and responses) a strength (a limited, renewable resource) that operates like a muscle that is depleted after use but can be renewed by regular exercise and rest (Baumeister & Exline).
3. *American Psychologist* (2000) Special Issue. Positive Psychology. Vol. 55 (5-183) – Guest Editors: Martin E.P. Seligman and Mihaly Csikszentmihalyi. Editorial and 15 articles - two of which are most relevant. 17 responses to this Volume were published a year later (2001), Vol. 56 (75-90) including the Editors' reply. More debate followed in 2005, sparked by one article.
 - o 'Mature adaptive defenses', best investigated longitudinally as they develop cumulatively over the life course; and can be strengthened by increasing social support as well as health promoting behaviors (Vaillant);
 - o 'Positive illusions' or 'unrealistic optimism' and finding meaning in life delay progress of life-threatening infection – e.g., HIV (Taylor *et al.*).
4. (2001) Section on Positive Psychology. Vol. 56 (216-238) - developed by Kennon M. Sheldon and Laura King. Editorial and 4 articles – two of which are most relevant.
 - o Positive outcomes in spite of serious threats to adaptation or development. Resilience is ordinary and common, "Ordinary Magic" (Masten).
 - o 'Realistic optimism' – tendency to remain positive based on what is known and accepting what is unknown or unknowable about the (challenging) environment; leniency – adoption of modest thresholds/expectations; hope and aspiration for positive experiences (Schneider).
5. (2005) Debate in response to Bonanno's article (2004) presenting resilience as the absence of PTSD; and hardiness, self-enhancement, repressive coping, positive emotion and laughter as some of the pathways to resilient outcomes – 5 Comments and author's reply. Vol. 60 (261-265).

- o Hardiness is a pattern of attitudes of commitment, control, and challenge to turn stressors into opportunities for growth; measured by the 65-item HardiSurvey III-R (Maddi);
 - o PTSD symptoms should not be relied on for measuring risk and resilience - subjective impact and internal distress are not synchronous with functional impact; functional resilience needs to be investigated longitudinally using multivariate qualitative and quantitative methods (Litz);
 - o Equating resilience with absence of PTSD is flawed; Holistic studies including a wide spectrum of psychopathology, resilience and adversarial growth and optimal functioning (salutogenic models of health and well-being) are called for (Linley & Joseph);
 - o Resilience includes a family of life course patterns and processes of successful adaptation despite adversity (Roisman);
 - o Resilience is an innate human psychological immune capacity (Kelley);
 - o Above points taken, but the formula resilience = absence of PTSD remained in use (see for instance Bonanno *et al.*, 2006).
6. ***Journal of Clinical Psychology*** (2002) Special Issue. A Second Generation of Resilience Research. Vol. 58 (229-321) – Guest Editor: Glenda Wilkes. Introduction and 7 articles – all relevant.
- o A resilient family is a social system with cohesiveness, flexibility, effective and protective communication and meaning-making processes in spite of risk (e.g., neighborhoods of poverty and violent crime); a call for social policies designed to reduce ecological risks and individual level clinical practice that believes in and facilitates family resilience (Patterson);
 - o Resilience in children and youth is a continuum ranging from defensive, adaptive and resilient elements (Rak);
 - o Resilience is the capacity to overcome exposure to identifiable risk such as child abuse. Abused children grew up to be non-abusive parents on their own - without any external intervention (Wilkes);
 - o Resilience is a complex dynamic trajectory along a continuum; should be studied from the subjects' perspectives within which (within-group) variation is to be expected (Morrison *et al.*);
 - o Resilient college students with learning disabilities acknowledged their disability and focused on positive events to create an "aura" of success for themselves (Miller);
 - o School administrators (high school and middle school Principals and others) can be educated to foster and promote resilience (Bosworth & Earthman);
 - o Resilience and resiliency inquiry metatheory charts the paradigm shift from pathogenic to salutogenic – postmodern/spiritual – multidisciplinary thought in three waves: resilience as a phenomenon; a process; energy and motivation to reintegrate resiliently (Richardson).
7. ***Brief Treatment and Crisis Intervention*** (2002) Special Issue. Crisis Response, Debriefing, and Intervention in the Aftermath of September 11, 2001. Vol. 2 (1- 104) – Editor: Albert Roberts. Editorial and 8 articles – three of which are most relevant.
- o Addition to the DSM-IV V code for uncomplicated post-traumatic stress responses would help to distinguish between normal human responses to traumatic events and PTSD (Roberts);
 - o Educators and mental health service providers developed a participatory psychoeducational workshop including review and understanding of local resilience – adopted a competence-based instead of pathology-based approach to intervention (Underwood & Kalafat);
 - o Post 9/11 mental health/debriefing services (in New York and Boston) tried to normalize reactions and promote social cohesion and support, resilience and self-empowerment (Miller).
8. (2004) Section on Disaster Mental Health. Vo. 6: 130-170 – no editorial, 4 articles – one of which is most relevant.
- o Evidence from Oklahoma city (post 1995 bombing and post 9/11) indicated optimism and community psychological resilience. This does not discount the need for mental health prevention and support systems (Pfefferbaum *et al.*).

9. *Journal of Biosocial Science* · (2004) Special Issue. Mental Well-being in settings of “Complex Emergency”. Vol. 36 (381-491) – Guest Editor: Astier Almedom. Overview and 8 articles – four of which are most relevant.
- o Participatory research involving local and international academic and practitioner teams had positive therapeutic effect for Andean village communities in Peru (Snider *et al.*);
 - o Combining anthropological/qualitative data with psychometric instruments is essential for investigating youth mental well-being and coping in Palestine (Lewando Hundt *et al.*);
 - o Multi-dimensional diagnostic and plural healing systems operate among Mozambican refugees and South African host communities, calling for both clinical and social diagnostics (SASPI Team);
 - o Social support of the right type, timing and *level* mitigates war-induced anxiety and mental distress in Eritrea, an ideal site for the study of resilience (Almedom);
10. *Journal of Loss and Trauma* · (2004) Special Issue. Risk and Resiliency Following Trauma and Traumatic Loss. Vol. 9 (1-111) – Guest Editor: Matt J. Gray. No editorial, 7 articles.
- o This collection of papers focused more on psychopathology, risk/vulnerability, PTSD and social dysfunction including ‘cultural trauma’ in Rwanda than on resiliency.
11. *Psychiatric Clinics of North America* · (2004) Special Issue. Disaster Psychiatry: A Closer Look. Vol. 27 (xi-602) – Guest Editors: Craig Katz and Anand Pandya. Preface and 12 articles – two of which are most relevant.
- o Controversy over PTSD diagnostics in international disaster settings acknowledged and culture-specific mental health service capacity building (e.g., *Conselho* model) advocated for (Barron);
 - o Disaster-exposed populations including in New York post 9/11 are more resilient than imagined - based on their low rates of PTSD and indicators of functional stability – therefore low participation rates in [trauma] research may be expected (North).
12. *Substance Use & Misuse* · (2004) Special Issue. Resilience. Vol. 39 (657-854) – Guest Editors: Jeannette Johnson and Shelly Wiechelt. Introduction/Editorial, 6 articles, Selected Resources, Internet Resources and International Abstracts – three articles are most relevant.
- o Resilience is a complex and dynamic process involving the individual, the event and the environment; listing universal ‘resilience factors’ is not that helpful because the factors are context-dependent and ordinary/common (Johnson & Wiechelt);
 - o Children of alcoholic parents followed up in a 30-year longitudinal study (in Kauai, Hawaii) who became ‘competent’ adult benefited from significantly larger sources of sustained support of caring adults than those with coping difficulties (Werner & Johnson);
 - o Ethnic pride promotes resilience among native Hawaiians (Austin).
13. *Bulletin of the World Health Organization* · (2005) Round Table. Mental and social health during and after acute emergencies: emerging consensus? Vol. 83 (71-76) Lead article by WHO personnel with comments from two prominent social psychiatrists (academic-practitioners).
- o The lack of consensus on the public health value of the PTSD concept and the appropriateness of vertical trauma-focused services was acknowledged, and, social interventions and integrated services called for (van Ommeren *et al.*); Best therapy for acute stress is social - safety, family reunification, justice, employment, re-establishing systems of meaning (Silove); caution against “category fallacy” and assumptions that western (universal) interpretations will apply (Summerfield).
14. *Global Environmental Change* · (2006) Special Issue. Resilience, vulnerability, and adaptation: A cross-cutting theme of the International Human Dimensions Programme on Global Environmental Change. Vol. 16 (235-316)

- Guest Editors: Marco Janssen and Elinor Ostrom. Foreword, editorial, and 6 articles including one with a bibliometric analysis of the published literature by citation and author/co-authorship links; and another with a scientific research agenda on the above cross-cutting themes.
- o The links between the human and ecosystem dynamic capacity to adapt to turbulent changes, re-organize and/or transform to continue functioning (Folke); the need for research and policy to move from vulnerability to resilience through ‘consilience’ (Adger) are elucidated.
- o The impact of Holling’s seminal work (1973) on current conservation and sustainability discourse has been phenomenal, along with Ostrom’s (1990) in terms of subsequent resilience research of direct relevance to policy and practice implications for adaptive governance of the commons.

15. *Ecology & Society* (2008) Special Feature on Managing Surprises in Complex Systems: Multidisciplinary Perspectives on Resilience. Vol. Guest Editors: Lance Gunderson and Patricia Longstaff 4 articles, three of which are most relevant.

- o While trust plays an important role in the effectiveness of communication of information needed to prepare for and cope with unpleasant ‘surprises’ in health and human security systems (such as pandemic flu, bioterrorism, or other disasters), ‘unwarranted confidence’ in one’s own institutional and/or human capacity may reduce institutional resilience (Longstaff and Yang).
- o Human resilience as studied in developmental psychology has much in common with resilience science in ecology with particular reference to environmental catastrophes (Masten and Obradović).
- o Socially cohesive social networks that sustain community resilience need to be structurally linked to macro-level resources and mechanisms to respond effectively to health and other emergencies. (Roderick and Roderick)

The majority of these scholarly discussions and debates demonstrate a concerted move away from the usual emotional/mental distress and trauma-focused psychopathology to a positive psychology of human strengths, encapsulated by the term resilience in its multi-faceted forms (see Table). During the second half of the 1990s, galvanized by the imminent close of the 20th century, psychologists and others had decided to take stoke and re-think prevailing assumptions and claims on the nature of the human capacity to adapt, and even thrive and/or grow in the face of adversity of different types and levels of magnitude. Viewed chronologically, this series of public discussions and debates charts a progressive paradigm shift from the disease-driven inquiries on risk and vulnerability to a clear turn of attention towards health-centered approaches to building resilience to disasters and preventing vulnerability to disease, social dysfunction, human and environmental resource depletion.

The *Journal of Social Issues* (1998, Vol. 54) put the topic of “Thriving” on the spotlight. At that time, the notion of post-traumatic growth (PTG) came as a refreshing change of subject from the then highly controversial diagnostic category of post-traumatic stress disorder (PTSD), particularly with respect to humanitarian policy and practice in non-western settings.^{16, 17} Although the post-traumatic growth

inventory, PTGI, was originally developed and tested among American college students, and not disaster-affected communities, it was later successfully employed in a study of displaced people in Sarajevo, exploring the dynamic process of transformation and growth following recovery from the trauma of the Balkan war.¹⁸ Karakashian’s interdisciplinary analysis of the historical, geo-political, social and cultural dimensions of human resilience in Armenia, a small nation that had experienced collective trauma of genocidal proportions was featured in this volume; presenting interesting parallels with Almedom *et al.*’s study of human resilience in Eritrea (featured in discussion # 9, Table), another small country for whom human and institutional resilience, particularly in the extraordinary levels of adaptive learning and transformations that took place within the self-organized systems health care, education, and social affairs under prolonged conditions of war and displacement.¹⁹

The new millennium was ushered in with the publication of special issues of both the *Journal of Social and Clinical Psychology* (2000, Vol. 19) and *American Psychologist* (2000, Vol. 55) focusing respectively on human strength and positive psychology. These took the discussion on the nature of resilience a step forward by arguing that it is in fact not the (rare) phenomenon it was assumed to be, but in fact resilience is quite common,

an “Ordinary Magic”. Between them, these two volumes explained the mechanisms whereby human resilience was demonstrated by self-control and mature adaptive defenses; and clarified the concept of hope as long-term goal-driven agency and pathways; a state of “realistic optimism” as perhaps more tangible than “positive illusions” or “unrealistic optimism” among those with life-threatening disease.

Views of resilience as an outcome identified by the absence of PTSD were challenged as simplistic and even misleading as the process of coping with trauma did not in fact preclude the experience of distress and narrative of trauma. As the debate continued in later issues of the *American Psychologist* (2001, Vol. 56; and 2005, Vol. 60), it became clearer that experiences of trauma and growth (vulnerability and resilience) were part and parcel of the same psychological dynamics of human adaptation to turbulent change, two sides of the same coin, as it were. Interestingly, the most recent systematic review, a meta-analysis of the question of acute distress and PTSD with reference to the response of Londoners to the bombings of July 7th 2005 came to the conclusion that “distress – a perfectly understandable reaction to a traumatic event – and post-traumatic stress disorder (PTSD)” should not be lumped together and medicalized... “Resilience is not about avoiding short-term distress – indeed resilient people include those who show their distress... “Resilient people may experience a period of distress and then recover with the support of their families and friends.”

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Most helpfully, The *Journal of Clinical Psychology* (2002, Vol. 58) provided the most comprehensive and clearly articulated set of articles on human (developmental) resilience with reference to children, youth, and families as social systems. As Richardson explained, the paradigm shift from pathogenic to salutogenic thinking had happened in three waves: Resilience as a phenomenon; resilience as a process; and resilience as the energy and motivation to re-integrate. These may conveniently be summed up as the three ‘P’s: a phenomenon, a process and the power (of re-integrating) that resilient children, youth, and families demonstrate. It is interesting to note that this third wave resonates with the resilience thinking in social-ecological terms as well.²¹

These discussions and debates were clearly accelerated by recent international political, social and economic concerns and priorities to promote, build, and maintain resilience at all levels – as we are faced with global threats to the health, social, economic, environmental, and geo-political sustainability of human

lives and livelihoods. The practice-oriented journal *Brief Treatment and Crisis Intervention* (2002, Vol. 2) focused on what happened after the terrorist attacks of September 11th 2001 in New York City and in Boston. It became evident that the traditional forms of mental health services had adapted to the changed climate of positive psychology to the extent that competence-based (rather than pathology-based) approaches were promoted. The argument for tailoring mental health services to prevent the worst outcomes by enhancing systems of social support was put forward.

Meanwhile, the *Journal of Biosocial Science* (2004, Vol. 36) published a special issue on mental well being in settings of ‘complex emergency’ following a panel discussion held at the Society for Applied Anthropology’s Annual Meetings in Portland, Oregon, the previous year. As the panel discussion was held on the day after the Iraq war began (March 20, 2003) questions on the levels of PTSD to be expected and the relevance of mental health services with reference to counseling and talk therapy; the uses and limits of psychometric scales for the assessment of mental well-being in the context of protracted conflict and/or post-conflict settings; the role of social support in promoting positive aftermath in the process of psychosocial transition in displaced families and communities were debated from the perspectives of anthropology, sociology, and medical/clinical practice. The theoretical and empirical (qualitative) ground work was laid for measuring resilience in settings of complex emergency using the sense of coherence scale short-form (SOC-13) adapted for use in nine African languages.²²

In the same year, the practitioner-focused journal *Psychiatric Clinics of North America* (2004, Vol. 27), and *Substance Use & Misuse* (2004, Vol. 39) also dedicated special issues respectively on disaster psychiatry and resilience. Again, evidence of the global paradigm shift was growing in previously seemingly unrelated fields as researchers, practitioners and policy makers continued to take a fresh look with a long-term approach to solving problems in the new millennium. This development was echoed in the World Health Organization’s Round Table discussion published the following year in the *Bulletin of the World Health Organization* (2005, Vol. 83). Since then, the Inter-Agency Standing Committee (IASC), a committee of executive heads of United Nations agencies, intergovernmental organizations, Red Cross and Red Crescent agencies and consortia of nongovernmental organizations responsible for global humanitarian policy established in response to United Nations General Assembly Resolution 46/182, has developed guidelines

for coordination of mental health and psychosocial support in emergencies. The guidelines were agreed and commended for adoption by all the parties concerned.²³

Finally, the last two years have seen increased visibility of the Resilience Alliance's public scientific discourse on resilience documented in the form of a special issue and a special theme section of the two leading academic research journals, respectively *Global Environmental Change* (2006, Vol. 16) and *Ecology and Society* (2008, Vol. 13). The former has brought to the fore the equal relevance of human and natural systems in the dynamics of adaptation and social-ecological resilience as a basis for sustainability, while the latter has focused on disaster management with reference to 'surprises' of environmental and public health consequence, particularly with reference to human security.

The linkages forged between the interdisciplinary research undertaken by Almedom *et al*, and disaster mental health research and practice, as well as the core elements of developmental, positive, and existential sub-disciplines of psychology; medicine/psychiatry; and last but not least resilience science founded in ecology and environmental studies are depicted in the above Figure. Some of these circles embrace more ambiguity and/or paucity of data than others. For example, while there is no shortage of studies in clinical psychology and community medicine/psychiatry using PTSD or absence thereof as a measure of resilience, the development of psychotropic medication, "resilience drugs" designed to alleviate symptoms of acute distress in the aftermath of crises remains a cause for concern²⁴ and may continue to perpetuate ambiguity in international mental health policy and practice. While it may be justifiable for medical practitioners to prescribe pharmaceutical remedies for those experiencing what may be normal levels of acute distress in the immediate aftermath of crisis, such practice may inhibit normal processes of re-integration and growth. Dependence on medication may militate against resilience building sustainable solutions, particularly in African countries, which continue to face rapid depletion of their human and material resources, rendering their systems of health and social care less than viable. Conversely, the multi-disciplinary fields of ecology, conservation biology and development economics and anthropology seem to have clear theoretical grounds on which to proceed with assessing social-ecological resilience, but there remains paucity of data. The Resilience Alliance's Resilience Assessment Work Books which are currently being field-tested may soon generate

the data awaited by policy makers and practitioners seeking sustainable solutions to mitigate if not reverse the threats of climate change and rapid depletion of non-renewable resources coupled with ill governance and lack of accountability in the management of human resources.²⁵ This is painfully relevant to African communities, scholars, and health care practitioners whose trained and qualified young health workers continue to be attracted to jobs in western health care services upon graduation from highly respected African institutions such as Makerere University Medical School.

Resilience thinking would be expected to reverse this tide by first changing the mindset of both western governments as well as non-governmental institutions which are already undergoing economic and political transitions that present real opportunities for adaptive learning. Collaborative efforts of both western and African policy makers can result in mutual gains in the long term if active measures are taken now to retain African health professionals in African systems of social and health care. However, this cannot be done by individual countries' independent efforts, unless the "International Community" of leaders and policy makers also re-think the terms of engagement with African countries and their natural and human resources.

Finally, it is important to note here that an increasing number of popular books and agency reports have also advanced our understanding of resilience by generating public discussion and debate through mass media channels.²⁶⁻³⁰ These are also timely and relevant to African health and social care systems analysis in its global context and are examined in a forthcoming publication.

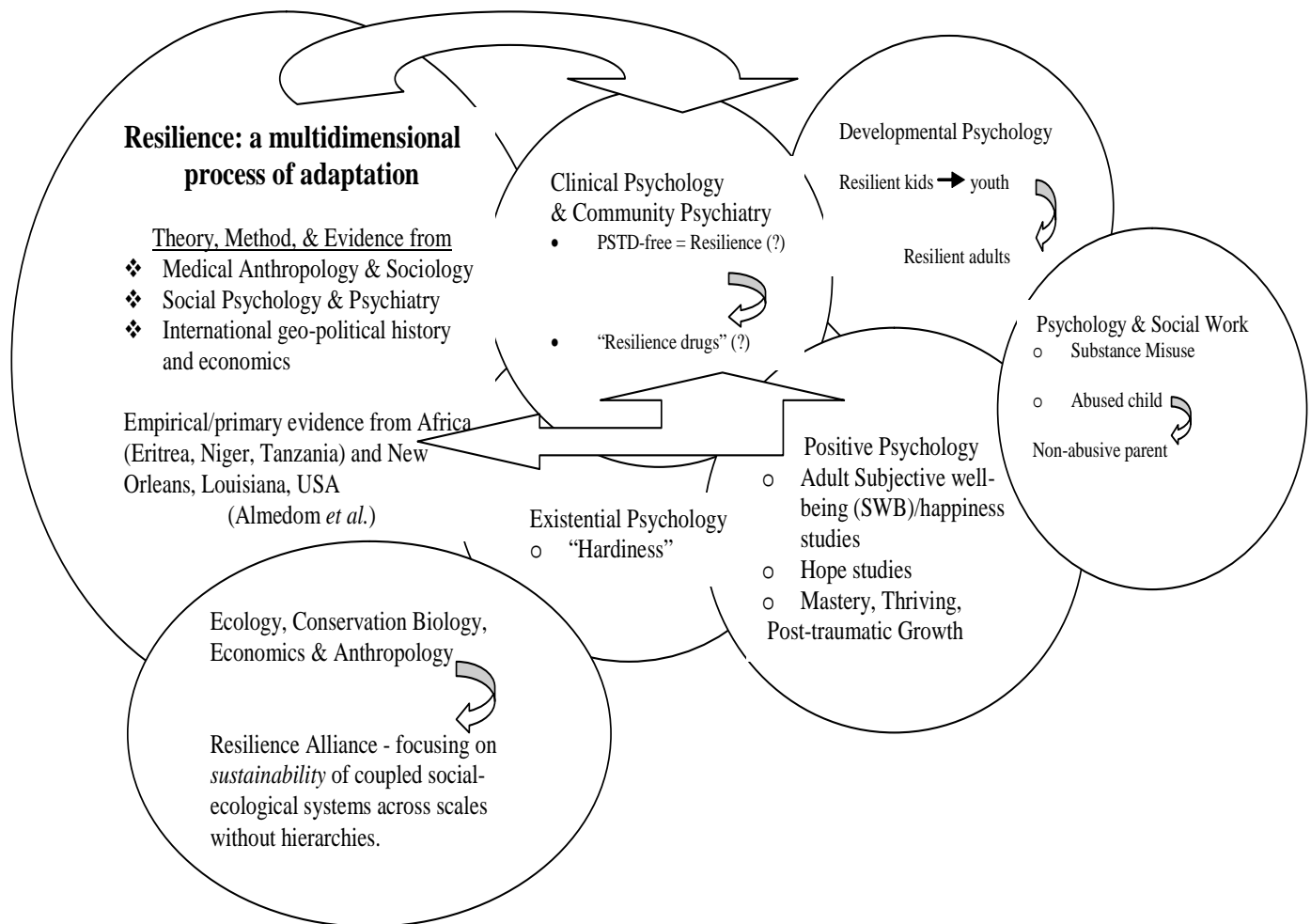
Conclusion

Resilience is a dynamic and multi-dimensional process of adaptation to adverse and/or turbulent changes in human, institutional, and ecological systems across scales, and thus requires a composite, multi-faceted *Resilience Index (RI)*, in order to be meaningfully gauged. Collaborative links between interdisciplinary research institutions, policy makers and practitioners involved in promoting sustainable social and health care systems are called for, particularly in Africa.

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Figure: An interdisciplinary overview of resilience research in the interface between disaster mitigation/response, human development, sustainability of social-ecological systems, and human security.



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