Journal of Futures Studies
2025,Vol. 29(4) 57-73
DOI: 10.6531/JFS.202506_29(4).0006

Article

Trauma-Transformative Foresight: Exploring the Liminal Spaces between Futures Unconsciousness and Futures Consciousness

Steven Lichty

Director, Frontline Futures, Nairobi Kenya

Abstract

This article introduces the concept of trauma-transformative foresight, an approach that integrates trauma healing with futures thinking to enhance the futures consciousness of Kenyan youth. Drawing on neurobiological insights and participatory foresight methods, the study explores how unresolved trauma constrains young people's ability to envision alternative futures, while healing processes can catalyze agency, optimism, and systems thinking. Using the Kumekucha Quest programme as a case study, the research demonstrates how trauma-informed, community-led interventions foster a shift from "futures unconsciousness" to "futures consciousness" across five dimensions—agency, time perspective, systems perception, concern for others, and openness to alternatives—with wisdom emerging as a sixth dimension. The article aligns this transformation with the World Health Organization's "Triple Dividend" framework, arguing that trauma-transformative foresight is essential to realising long-term developmental outcomes in health, productivity, and intergenerational wellbeing. The study offers practical insights for development practitioners, policymakers, and futurists working in trauma-affected, low-resource settings.

Keywords

Trauma-Informed Foresight, Futures Consciousness, Healing-Centred Development, Neurobiology of Trauma

Introduction

This article pioneers the concept of trauma-transformative futures by exploring the liminal spaces found at a four-way nexus of trauma-healing interventions, empowered Kenyan youth, futures consciousness, and the Triple Dividend. Studies in the field of experimental psychology have shown that various types of trauma (historical, individual, transgenerational, developmental, etc.) can impair an individual's futures consciousness, and thus reduce their foresight/futures thinking skills and aptitudes. Neurobiological studies show that past and future thinking is processed in the same parts of the brain; therefore, unresolved, constraint-laden, traumatising, unhealed pasts can lead to limited abilities to envision a better future. However, if these traumatised pasts can be reconciled via community-led trauma healing programmes, the brain's neuroplasticity can enable a reset and thus increase futures consciousness and ultimately enhance futures thinking.

The article contributes important insight into the economic, political, and social dimensions of international development, as well as the World Health Organization's concept of the "Triple Dividend," a concept advocated by the WHO and other UN agencies that stresses the importance of investing in today's adolescents.[1] Unleashing the futures thinking potential among marginalised groups and the millions living in poverty via trauma-transformative foresight will be a powerful tool for empowering current and future generations.

* *Corresponding author*.
E-mail addresses: *stevelichty@gmail.com* (S. Lichty).

Received: 3 April 2024 and Accepted: 30 September 2024

Trauma-Transformative Foresight

A central argument in this study is that if we want to see flourishing societies for most of Africa's population in the coming decades (the Triple Dividend realised), it is going to require an active engagement with the future (via increased futures consciousness) among the current generation of lower-/middle-class adolescents and youth who have successfully dealt with their various traumas. However, suppose these young generations remain caught in multiple forms of trauma (individual, collective, historical, transgenerational, etc.) and embody a futures unconsciousness that impedes their ability to envision and build a better future. In that case, we will not see a Triple Dividend, but only the replication of used futures that will leave millions marginalised from living in a flourishing society. Fig. 1 shows the various components of this argument. Arrow A represents a movement within Kenya's population from a trauma-inflicted to a trauma-healed population. Arrows B and C illustrate a pathway of increased futures consciousness that arises from trauma healing (Arrow B) and its potential for realising the Triple Dividend (Arrow C). Arrow D denotes the direct impact of a trauma-healed population on the Triple Dividend. Finally, Arrow E emphasizes an all-too-common trajectory where elements of futures unconsciousness (due to trauma) result in used futures, which fall short of the concepts underpinning the Triple Dividend.

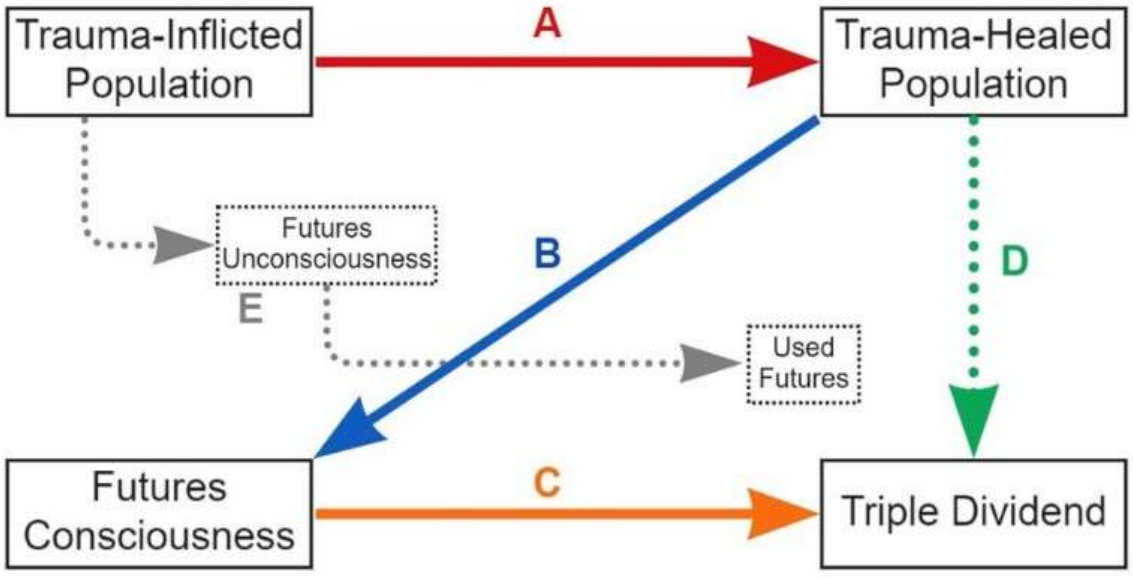

Fig. 1: Research Road Map (Author's own)

Multiple research streams demonstrate that healing-centred approaches to addressing trauma are crucial to unlocking the current potential of human beings. Clarke-Habibi & Reimann (2023) developed the Trauma-Awareness Spectrum to inform programme design and organisational operations (see Fig. 2). If we overlay different foresight and futures thinking approaches used by practitioners, we may discover that some approaches are, in fact, trauma-indifferent or trauma-reactive. Others would be more trauma-sensitive and trauma-informed. Through this study, I would like to see foresight practitioners and futurists become more trauma-responsive, i.e., they would include a trauma focus on their context analysis, programme/project design, and implementation. This approach would be critical when working with marginalised communities and/or conducting participatory and democratic futures. Finally, trauma-transformative foresight would then represent the nexus of foresight and futures thinking arising from individuals, communities, and institutions that have deliberately walked through a healing-centred trauma programme that radically transforms their thinking, enabling them to reconcile the past, re-engage with the present, and reimagine the future.

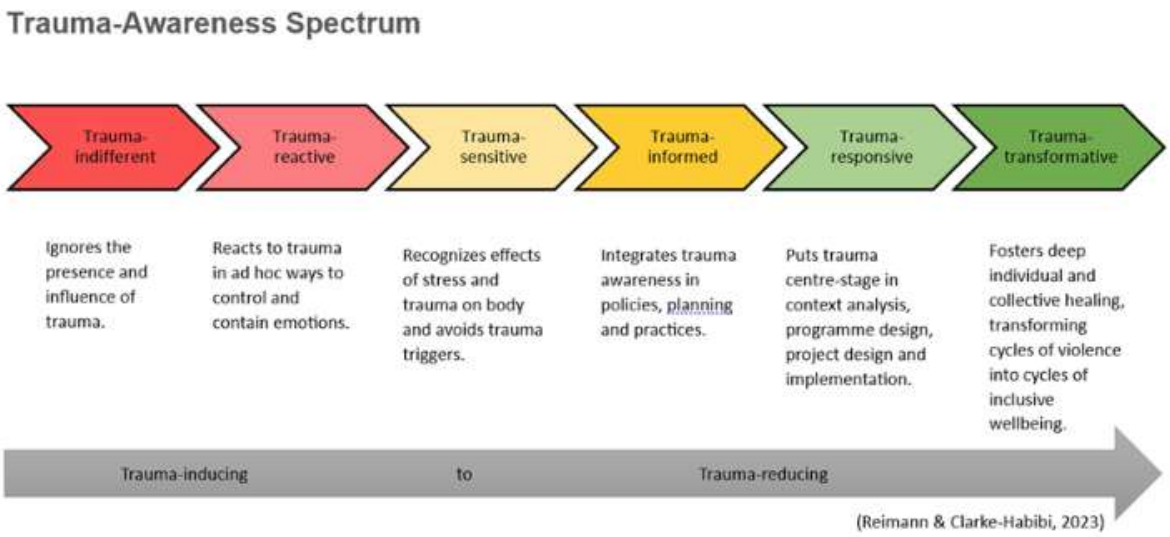

Fig. 2: Trauma Awareness Spectrum (Reimann & Clarke-Habibi, 2023)

Research Approach

The article's research design utilised a qualitative methodology and mixed-method tools for data collection. At the meta-methodology level, Integral Futures (IF) was used as a macro-level framework to understand the scope and depth of the study's methodology and methods. IF offered a holistic approach for exploring critical futures (Wilber, 2001; Esbjörn-Hargens, 2009), and fostered important questions related to considering the future of individuals, the collective, and for differentiating between external social/physical environments and the internal psycho-spiritual reality (Slaughter, 2008).

IF is closely related to Anticipatory Action Learning (AAL), the meso-level and primary methodology used in the research. AAL was used "to develop a unique style of questioning the future to transform organizations and society" (Inayatullah, 2006, p. 656). Combining Futures Studies with AAL facilitated a reflexive process of questioning, creating, and again questioning social presuppositions. AAL was also collaborative and worked within participants' epistemological framework and dominant worldviews. Both IF and AAL acknowledge the complexity of systems, cultural/worldview contexts, and intersectionality of belief, behaviour, and belonging—all of which were important factors in this study.

Mixed-method data collection tools

A mixed-method set of tools best supported the two methodological approaches. Fig. 3 shows where these methods were used in relation to the study's research roadmap. Baseline and endline surveys were conducted by the implementing partner during the project. The author conducted three futures workshops (one in Nairobi and two in Kwale County). The four-hour workshops combined AAL tools—the Futures Triangle and Causal Layered Analysis (CLA)— to question the past, understand the present, and explore the future as it related to the socio-economic ecosystem for both communities. The Futures Triangle was used as a warm-up exercise in the first hour. After identifying pushes, pulls, and weights, three scenarios were explored (business-as-usual, worst-case, and best-case).

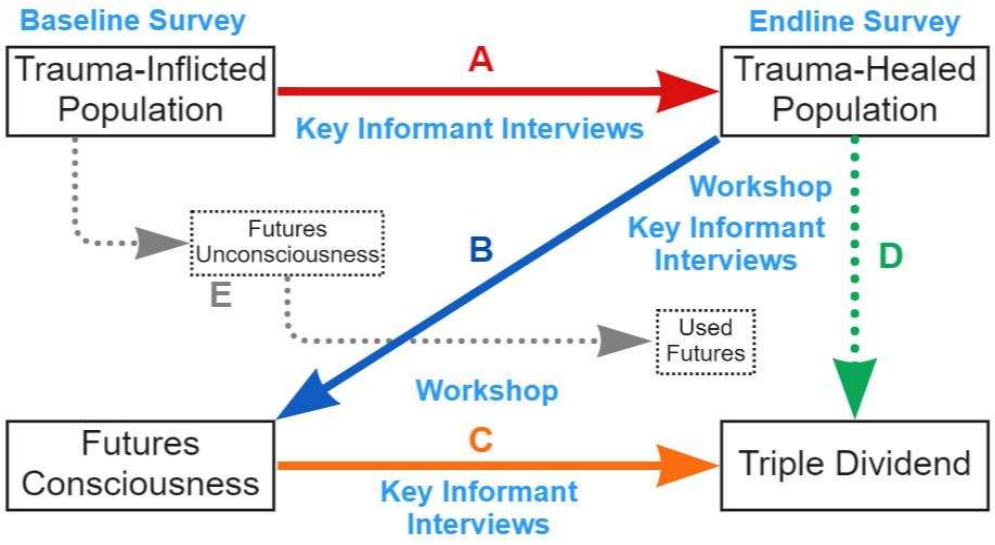

Fig. 3: Research Methods Map (Author's own)

The workshops then focused on conducting CLA to dive deeper into the realities of mapping the present to transform the future. Core insight for this study was gained in this reflexive portion of the workshop, as participants reflected on how unrecognised trauma and painful pasts influenced their engagement with futures thinking. These processes correspond to the areas marked with Arrows B, C, and D in Fig. 3. During field visits to Majengo and Kwale County, KIIs were conducted with staff of GSN, DFH-RC, and SambaSport. These KIIs aimed to gain additional insight into the wider ecosystem within the two communities.

Situating Trauma Across Kenya

Context and background

Adolescents (13-17 years of age) and youth (18-24) in Kenya often experience chronic stress due to high levels of poverty, unemployment, domestic violence, abusive home life, police harassment, and exposure to traumatic events, such as violent crime, electoral violence, witnessing extra-judicial killings, and terrorism (i.e., youth being targeted for al-Shabaab recruitment). Transgenerational and historical trauma combined with inequality and high youth unemployment can influence youth's sense of self-belief, agency, and creativity (Lopez et al., 2019).

Adolescents and youth, representing 55% of the current population in Kenya, are particularly susceptible to the adaptation of healthy and unhealthy habits and behaviours of others (Ndungu, 2020). A complex ecosystem of communities and institutions (families, neighbourhoods, schools, health clinics, faith communities, security sector actors, and employment/training centres) are increasingly challenged by changing social and economic conditions within the larger society. Youth are surrounded by "social influence agents" such as family, teachers, friends, and peers who serve as role models. These agents often co-determine adolescents' and youth belief systems, spur the justification of certain behaviours, and heavily influence youth attitudes regarding how they view themselves vis-à-vis society (i.e., whether they are socially integrated or remain on the margins as outsiders).

However, traumatic experiences negatively impact an individual's wellbeing, behaviour, and ability to learn and engage positively with others. If one struggles to become a productive part of the economy, this increases overall instability, poverty, crime, extremism, and adverse health outcomes. This adverse environment is further compounded by elevated levels of fear and stigma in Kenya when it comes to discussing mental health.

Kenya's four realms of adverse experiences

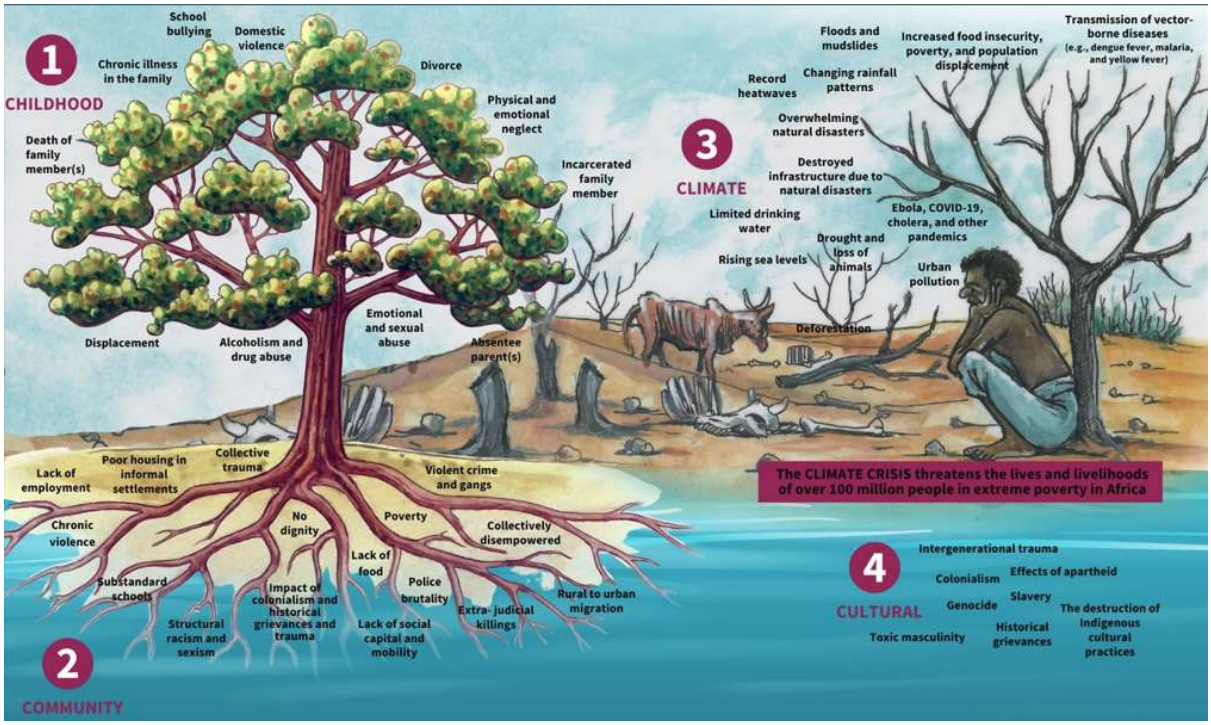

Fig. 4: The Four Realms of ACEs (Waibochi et al., 2023)

Waibochi et al. (2023) developed a framework to identify four realms of adverse experiences (childhood, community, climate, and cultural). This builds on the extensive longitudinal studies conducted on Adverse Child Experiences (Felitti et al., 1998). Fig. 4 shows the following four realms:

1. Adverse Childhood Experiences, which are potentially traumatic events happening before age 18 that can have lasting effects on a person's wellbeing and their relationships with others.
2. Adverse Community Environments stem from negative social forces affecting a community's health and wellbeing. These environments are characterized by distrust, isolation, and a lack of resources, creating a cycle of trauma. Community-level trauma makes it even harder for individuals within that community to heal from their own traumatic experiences.
3. Adverse Climate Experiences are increasingly impacting Kenya and Africa, with young Kenyans facing water scarcity, deforestation, pollution, extreme heat, rising sea levels, erratic rainfall, hunger, poverty, infrastructure loss, livestock deaths, and displacement due to climate change.
4. Adverse Cultural Experiences encompasses historical and ongoing oppression, such as slavery, colonialism, apartheid, toxic cultural norms, intergenerational trauma, unresolved grievances, genocide, and the loss of indigenous practices, all leaving lasting wounds on communities.

Kumekucha Quest Programme

This study was conducted as part of a research partnership with the Green String Network (GSN), an NGO based in Nairobi. GSN facilitated a healing-centred, community-led, trauma-transformative programme called "Kumekucha Quest" (Kumekucha is Swahili for "It's a new dawn"). Targeting youth aged 18-24 years in Nairobi and Kwale Counties, Kenya, Kumekucha Quest (KQ) is a practical, hands-on approach developed by GSN that utilises holistic mental health and psychosocial support (MHPSS) approaches.[2] KQ walks participants through an

applied and interactive learning process that presents the key concepts of toxic stress and the effects of trauma, coping mechanisms, forgiveness, healing, reconciliation, and resiliency, and incorporates cultural stories and artwork throughout the process. GSN is also piloting Kumekucha Vijana (teenagers) for 13- to 17-year-olds and Kumekucha Watato (children) for 10- to 12-year-olds (see Fig. 5); however, neither of these younger age groups were part of this study.

KQ takes "at-risk" youth on a 12-week peer-facilitated journey or quest to address experiences of past trauma and learn to build resilience to daily stressors and challenges. Peer support groups are facilitated by one youth and one adult. This pairing of community adults with youth leaders supports an intergenerational connection and provides built-in community mentors. GSN's previous evaluations and research find evidence that within communities characterised by poverty, violence, police abuse, etc., the KQ programme resulted in self-reported improvements with agency, social cohesion, and resilience among youth (Lopez et al., 2019).

GSN lacked insight into how these results affected youth employment and livelihoods or enhanced KQ participants' futures consciousness. KQ provided a chance to test theories on trauma's impact on livelihoods and future outlook, helping GSN create strategies for communities to achieve the Triple Dividend.

Fig. 5: Kumekucha Quest Programme (Green String Network, 2023)

Futures Unconsciousness to Futures Consciousness

Before revealing how KQ increased futures consciousness among participants, it is important to explain what futures consciousness is and posit the concept of a continuum from futures unconsciousness to futures consciousness (FC). FC is related somewhat to futures literacy, but instead of general skills and abilities pertaining to futures literacy's tools, scenario building exercises, foresight practices, etc., FC encompasses cognitive, emotive, and creative aptitudes that could be considered precursors to futures literacy (Conway, 2022; Pouru-Mikkola & Wilenius, 2021).

Defining futures consciousness

As one of the prominent scholars on FC, Thomas Lombardo defines it "as the total integrative set of psychological abilities, processes, and experiences humans use in understanding and dealing with the future" (2007, p. 1).

Ahvenharju et al. define it as "the human capacity to understand, anticipate, prepare for, and embrace the future. It can be considered as the multiple processes that influence, firstly, how one projects the self and its social surroundings in potential futures, to actively adapt oneself to it when it becomes the present; and secondly, how one projects potential futures and adapts their present actions to bring about the ideal future" (2021, p. 2). A third definition is provided by Maree Conway, who characterises it as "the explicit awareness of the innate human ability to anticipate and imagine futures in the present" and how "we can also become aware of how we think about futures" (2022). Using these definitions as reference points, we can now explore the historical background to FC, core dimensions of FC, how it is being developed into a psychometric scale, and finally discuss futures unconsciousness—the inverse of futures consciousness—and its relationship to trauma.

History of futures consciousness

According to Lombardo (2007), Johan Galtung and Öystein Sande were the first to coin the phrase "future consciousness" [3] in the early 1970s.[4] In a study of ten nations (Ornauer et al., 1976), a survey question asked whether the year 2000 was thought to be relatively close or far away. Respondents from socialist and developing countries demonstrated greater future consciousness than those from developed countries. Galtung's rationale for these findings relates to a sense of "arriving" or "not yet arriving"; with greater positively correlated for respondents in countries yearning to be more developed and vice versa. However, there is more FC among the higher class or social positions within the Norwegian respondents. Reasons for this finding could relate to: 1) having a more secure status and ability to plan years and even decades out (while those in lower classes have more economic insecurities and dependencies resulting in less socio-economic stability); 2) individuals in high positions typically are involved with managing, planning, and forecasting the future; and 3) there is greater social and civic participation among the top class, thus plausible that a more significant interest with the future is involved (Sande, 1972).

Dimensions of futures consciousness

Various scholars emphasise several core components or dimensions of FC. Sande (1972) presented six dimensions—length, level of interest, optimism, influence, expectations, and value. Length includes both astronomical time (days, weeks, months, years, etc.) and social time (social construction and perspectives of time, e.g., 30 years, can have different meanings for a 60-year-old versus a 20-year-old). The level of interest consists of being conscious of the future at the personal, national, and world levels. Optimism simply refers to an individual's expectation that something good will happen in the future, but with Sande's caveat that a person's experience in their own life (positive, life-affirming versus trauma, pain, and poverty) is likely to carry over into their views of the future. He states, "There is rather a general 'mood' that colours the perception of both the close and distant environment" (1972, p. 276). Influence relates to personal agency, capacity, or a subjective sense of how much control or power a person feels in their life.

Futures consciousness involves internal and external control: events are attributed to personal actions (internal) or fate (external), seen as luck or divine will. Expectations shape futures consciousness; for instance, the Ten Nation Study (Ornauer et al., 1976) found respondents focused on technology and high living standards but rarely on justice or social equality. Values reflect people's hopes for the future, regardless of likelihood.

From Lombardo's perspective (2006b), there are 13 cognitive dimensions to futures consciousness. His extensive work on FC contributes rich insight into these dimensions, but there is significant duplication among these 13. These 13 can be condensed into the following five dimensions. Insight from this study suggests "wisdom" should be added as a sixth dimension (Lombardo discusses wisdom at length, but is not part of his original 13):

1. Imagination, Creativity, Open-mindedness
2. Foresight, Possibility/Hypothetical Thinking, Scenario Building
3. Goal-setting, Decision Making, Planning
4. Critical Thinking, Reasoning, Problem Solving
5. Holistic Insight, Empirical Observation

6. Wisdom - The holistic ability to combine psychological capacities with character virtues to increase futures consciousness by uniting the mind with emotions, knowledge with ethics, consciousness with action, conviction with open-mindedness (Lombardo, 2006a; 2006b, 2010, 2011b, 2011c, 2013, 2016b).

Using the foundation provided by Lombardo and others, a research team at the University of Turku in Finland piloted empirical studies of futures consciousness among individuals and communities (University of Turku, 2022). Figure 6 represents the five dimensions developed by the Turku team: time perspective, agency beliefs, openness to alternatives, systems perception, and concern for others (Ahvenharju et al., 2018).

1. Agency Belief: Having some form of ability or empowerment to influence how the future will unfold.
2. Concern for Others: Building on the four previous dimensions, concern for others incorporates values, morals, and ethics to guide a person's critical mindset and engagement with their society.
3. Openness to Alternatives: This trait combines elements of creativity, imagination, critical thinking, openness, and the ability to embrace change.
4. Systems Perception: Using holistic thinking to maintain a systemic conceptualisation of problems and processes from an eco-psychological self-perspective.
5. Time Perspective: Forms the foundation of the five dimensions and encompasses the basic concept of understanding time consisting of the past, present, and future.

Turku then developed a Futures Consciousness Scale (FCS) based on their five dimensions. The current version expands the original 20 questions to now include 40 questions. Each dimension aligns with validated scales in existing literature (Lalot et al., 2020). Acknowledging cultural bias toward Western views (Ahvenharju et al., 2021), the team aims to adapt the FCS for non-Western contexts, with this study contributing to that effort.

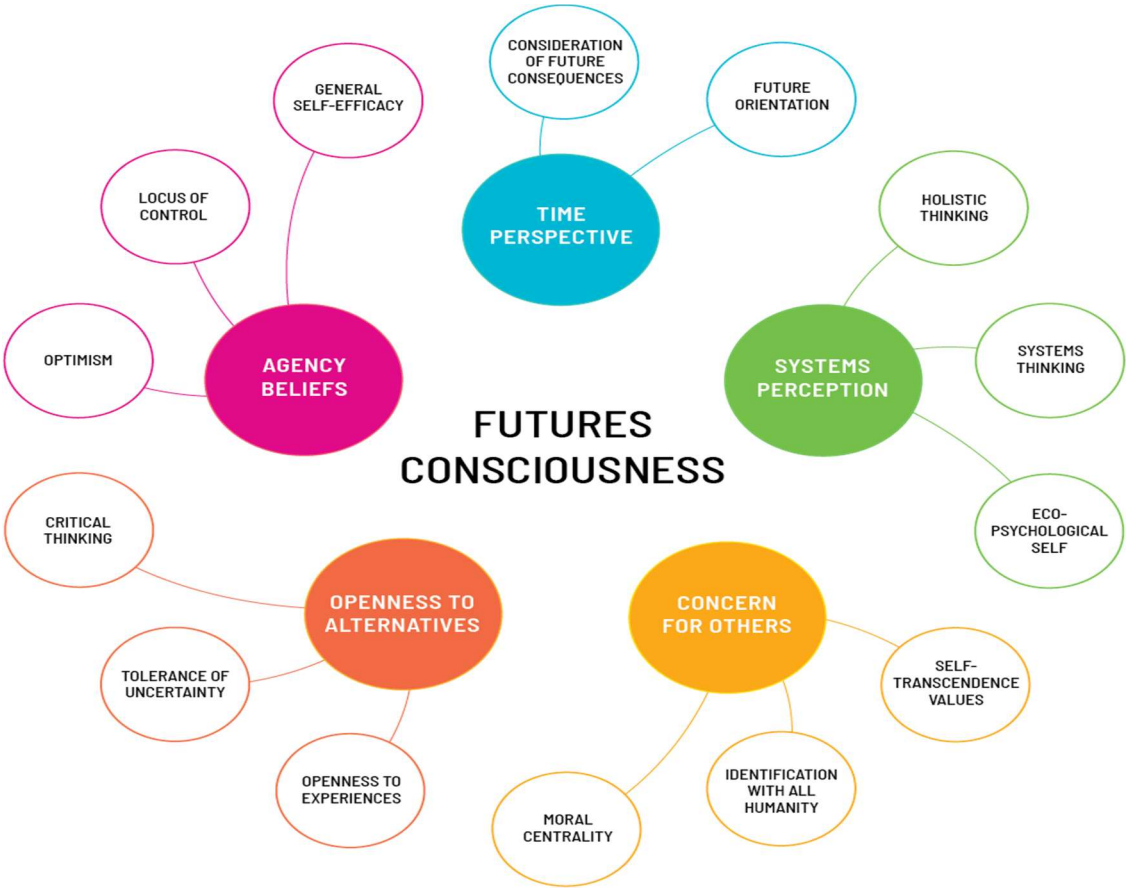

Fig. 6: Five Dimensions of Futures Consciousness (University of Turku, 2022)

Trauma and futures "unconsciousness"

Within the Futures Studies community, we can discuss being futures literate and by extension, futures illiterate. Any form of literacy is premised on basic cognitive functions, educational exposure (formal or informal), and skill acquisition aptitudes. Just as a person can move from being futures illiterate to futures literate, is a similar continuum possible from transitioning from futures unconsciousness to futures consciousness? How would we define futures unconsciousness?

"Unconscious" refers to the part of the mind that is inaccessible to awareness but influences behavior and emotions. Commonly, we imagine it as being unresponsive, but in reality, the unconscious holds memories, learned behaviours, and suppressed emotions. Antonyms for futures consciousness might include powerlessness, alienation, lack of control, disengagement, and negative cognitive states—traits that also align with various forms of trauma.

The neurobiology of trauma and futures thinking

Literature at the intersection of the neurobiology of trauma and futures thinking is complex and oriented more toward the medical community of scholars. Recent findings from neuropsychological, cognitive, and neuroimaging research provide a better understanding of the neural and cognitive processes that undergird the mental representation of individual future events (Campbell et al., 2017; D'Argembeau, 2012; Mullally & Maguire, 2014 & (Schacter & Addis, 2007). Neurobiological studies using functional Magnetic Resonance Imaging (fMRI) reveal that past thinking and future thinking are thought to be processed in the same regions of the brain, i.e., the frontal temporal and parietal regions (Campbell et al., 2017; Demblon et al., 2014; Benoit & Schacter, 2015 & Hassabis & Maguire, 2007). There is also a connection with other regions of the brain that are part of this core system that support higher-order thinking that provides a framework for utilising one's autobiographical knowledge to link imagined events with personal stories and themes from the past (Demblon et al., 2014).

Scholars also argue that our episodic memory (the visual function that provides personal details to particular past events) and semantic memory (factual indexing of what is known to be true) work together to project the past into the future. However, if the semantic memory is oriented around constraints or trauma (time, money, pain, rejection, violence, etc.), these can hinder the visualisation of particular future possibilities (Rhemann, 2019). Thus, when engaging with futures thinking, our brain will import past memories as reference points for imagining the future (Mullally & Maguire, 2014).

Trauma's impact on futures consciousness—the missing link

Combining Kenya's trauma-affected environment with the neurobiology linking future processing to past memories, reveals that envisioning positive futures is often inaccessible for trauma victims. Herman (1997) explains that unhealed traumas demand recognition. Without truth-telling, individual healing and social order are hindered. She notes that those unable to live fully in the present may mentally return to painful pasts, leading to two reactions: acting out or shutting down. "The acting-out kids get attention," she states, "while the blanked-out ones fade, losing their future bit by bit" (1997, p. 84).

There is the adage—garbage in, garbage out—or, as Cozolino more eloquently says, "Our brain embodies the environment that shapes it…our neural architecture is the tangible expression of our learning history" (2010, p. 30). Empirical studies show that a social environment (home, school, and community) marked by secure attachment (physical, relational, and emotional safety) provides the optimal ecosystem for children to grow, learn, and flourish (Letchford, 2020). This ideal ecosystem does not represent the past for many adult Kenyans, nor is it the reality for the country's many children and adolescents today. Unhealed and hidden trauma in Kenya is manifesting itself in repetitive "used futures," a term coined by Inayatullah (1998, 2006, 2008, 2020). His concept entails the idea that we disempower ourselves when we accept or borrow the future of others and make it our own. Ramos (2016) suggests that used futures are images or ideas about the future created by someone else for another context, but are unconsciously held by individuals, which blinds people to more empowering and authentic visions of the future.

Trauma Healing Journeys that Transform Futures Consciousness

Returning to the connection between the healing-centred, trauma-transformative components of KQ, participants were asked how the KQ programme influenced their attitudes, beliefs, and behaviours for each of the five dimensions of the FCS. As discussion ensued around each dimension, participants began to see the linkages between each, which created a ripple effect of contributions connected to the other dimensions.

Qualitative reflections on the five dimensions

Agency Beliefs: KQ participants reported increased agency, self-respect, and empowerment—key elements in enhancing futures consciousness. This growing sense of control and destiny, arising from their trauma-healing journey, may unlock other dimensions of futures consciousness.

Concern for Others: GSN consistently finds that trauma-healing programs increase participants' empathy. The KQ process created a safe space for sharing personal stories, allowing participants to realize they weren't alone. This fostered strong social bonds and broadened their concern for others, extending beyond peers to a larger network of friends, family, and colleagues.

Openness to Alternatives: As participants processed past trauma, they felt mentally "unshackled," moving beyond a "prison" of destructive thought patterns. The supportive connections fostered through empathy enabled them to explore new ways of living and interacting, breaking free from repetitive cycles of pain and "used futures."

Systems Perceptions: Seeing the five dimensions before them, participants visualised the systems connecting the challenges and opportunities in their community. They also grasped the complexity and cause-and-effect relationship within their surrounding social systems.

Time Perspective: A common comment was that the KQ journey had enabled them to reconcile their past trauma and come to terms with the painful memories that had influenced their present attitudes and actions. There was a consensus that this process enabled them to think more actively about the future, particularly from an optimistic point of view.

Wisdom: A missing dimension of the FCS might be wisdom, as it emerged as a unifying dimension of futures consciousness (FCS) in this study. When a participant suggested "wisdom" to represent the core of the five FCS dimensions, the group readily agreed, feeling they had all grown wiser through the KQ training. As defined by Lombardo (2010), wisdom is holistic, integrating broad, meaningful knowledge with practical, ethical application, benefiting both oneself and others. This suggests wisdom as the culmination of enhanced futures consciousness.

However, wisdom is not a term often associated with youth in Kenya today. Wisdom is typically considered the obligation and characteristic of the *wazee*, the older men in society, and this could be why the youth hesitated to use the term. Nonetheless, wisdom is an apt term for what these youth have exhibited from their healing journey. By overlaying the five dimensions of their trauma-healing experience, they gained an additional perspective on what they learned.

Quantitative findings on the five dimensions

All 34 participants completed a 20-question survey on futures consciousness during the three workshops. Respondents were asked to reflect on the training they had received and respond to the questions using a five-point Likert Scale (1 = major decrease; 2 = minor decrease; 3 = no change; 4 = minor increase; 5 = major increase). Table 1 shows there was an overall increase in four of the five dimensions. Most respondents stated there was no change in their systems perceptions, but an equal percentage saw an increase. Of the five dimensions, this one showed the least positive change. [5]

Table 1: Futures Consciousness Survey Responses

Futures Consciousness Dimension	Major Increase	Minor Increase	No Change	Minor Decrease	Major Decrease
Agency Beliefs	47%	37%	13%	2%	1%
Concern for Others	65%	26%	3%	2%	4%
Openness to Alternatives	55%	31%	6%	4%	4%
Time Perspective	49%	41%	7%	1%	2%
Systems Perceptions	23%	24%	47%	4%	2%

Relationship between trauma healing and increased futures consciousness

These data suggest a positive relationship between trauma healing and increased futures consciousness. The narratives gained in the workshops and data from the futures consciousness surveys provide preliminary evidence of a strong connection between the healing journey and increased futures consciousness via the five dimensions. We can call this "Trauma-Transformative Futures," defined as the process of engaging with futures and foresight through neurobiological and quantum social lenses, facilitated by a holistic, healing-centred journey that begins the reconciliation of the past, re-engagement with the present, and reimagining the future.[6]

Futures unconsciousness and used futures

If trauma healing can enhance futures consciousness, the reverse may also be true: unresolved personal, historical, or intergenerational trauma could trap individuals or communities in "futures unconsciousness." Like physiological unconsciousness, this state involves disempowerment, self-protection, risk aversion, closed-loop thinking, and being "time trapped," limiting engagement with possible futures. Table 2 builds out in further detail the opposing dimensions of futures consciousness.

Table 2 - Futures Unconsciousness vs. Futures Consciousness

Futures Unconsciousness	Futures Consciousness
Disempowerment: Lack of self-belief and low self-esteem exacerbate the debilitating effect of being time-trapped.	Agency Beliefs: Having some form of ability or empowerment to influence how the future will unfold.
Self-Protection and Projection: While communal relationships are important, a preoccupation with fear and the unknown fosters self-protective behaviours, and if provoked, an external projection of negative thoughts and behaviours.	Concern for Others: Building on the four previous dimensions, concern for others incorporates values, morals, and ethics to guide a person's critical mindset and engagement with their society.
Risk Aversion: Seeing no positive futures leads to risk avoidance and personal path dependencies that often carry harmful mental and physical health risks.	Openness to Alternatives: Combines elements of creativity, imagination, critical thinking, openness, and the ability to embrace change.
Closed Loop Thinking: An in-the-box thinking closes the mind to alternatives, further reinforcing a risk- adverse mindset. The "dream" is to have a dream someday.	Systems Perceptions: Using holistic thinking to maintain a systemic conceptualisation of problems and processes from an eco-psychological self-perspective.
Time Trapped: An internal memory clock constantly rewinds to replay the past to only bring "used futures" to the present.	Time Perspective: Forms the foundation of the five dimensions and encompasses the basic concept of understanding time as consisting of the past, present, and future.
Ignorance: Lack of exposure to the wider world, risk aversion, in-the-box and insular thinking, low self-esteem, combined with a future filled with a repeat of a trauma-filled past result in a simple ignorance of reality and any strategies for changing it.	Wisdom: The holistic ability to combine psychological capacities with character virtues to increase futures consciousness by uniting the mind with emotions, knowledge with ethics, consciousness with action, conviction with open-mindedness.

Futures Consciousness and the Triple Dividend

The Triple Dividend (see Fig 7) focuses on increasing investments now with adolescents on issues related to their health and wellbeing to yield a "triple dividend" of benefits that will transform 1) the essential capabilities of the current adolescent population, 2) their future trajectories of health and wellbeing into adulthood, and 3) their ability to increase the welfare of their children, i.e., the next generation (World Health Organization, 2018 & Patton et al., 2016).

Background to the concept

The Triple Dividend concept, formally introduced by Patton et al. (2016), builds on earlier research highlighting the importance of investing in adolescents, particularly as the world faces its largest-ever generation of 10- to 24-year-olds (Sawyer et al., 2012). Public health investments focused mainly on children under five achieved gains in reducing child mortality. Still, they led to stalled progress in adolescent health, as over 90% of research centered on early childhood. This focus inadvertently shifted attention from crucial developmental needs after age five.

The concept of the Triple Dividend may have been officially launched in 2016 with the study by Patton et al. (2016). Yet, earlier global processes and scholarship alluded to the importance of focusing on adolescents and the anticipated future benefits (Sawyer et al., 2012). In short, a decade of early-child health focus inadvertently diverted attention from the essential human development processes occurring after five years of age (Azzopardi et al., 2019; Bundy et al., 2018; Patton & Temmerman, 2016 & World Health Organization, 2018).

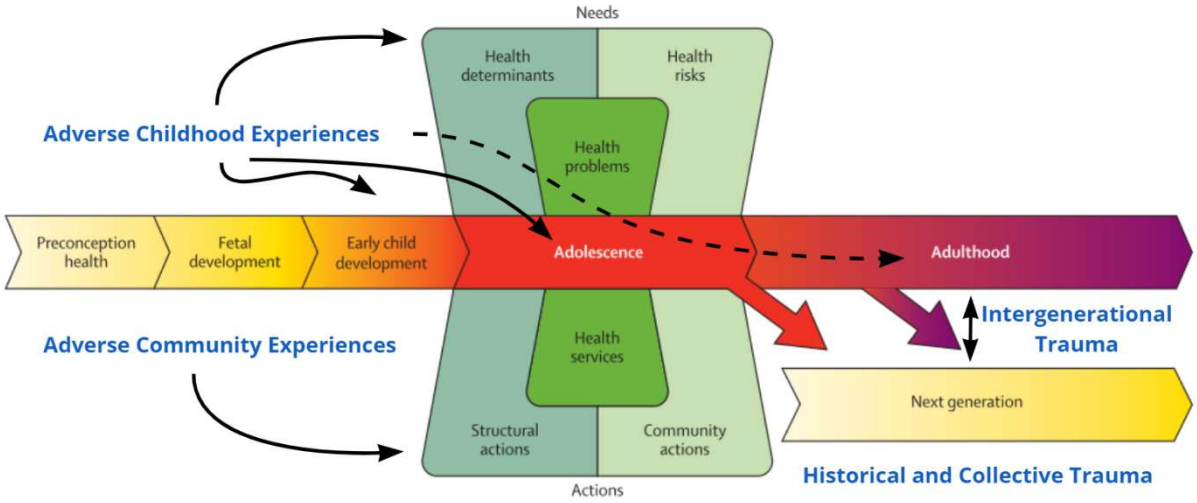

Fig. 7: Trauma and the Triple Dividend (Adapted from Patton et al., 2016)

Role of mental health in the triple dividend

Investments in adolescents aimed to bring about the Triple Dividend often focus on more comprehensive components of their ecosystem (education, social protection, health, urban planning, criminal justice, etc.). Specifically, within the health sector, investments center on substance abuse, disease control, accidents/violence, reproductive health, mental health, etc. However, most literature fails to fully address the broader spectrum of trauma among adolescents, including historical, communal, and trans/intergenerational trauma. The discussion instead is focused on trauma response to accidents and violence and is not grounded in deeper structural and historical traumas (Bundy et al., 2018; Novick et al., 2018; Patton & Temmerman, 2016; Save the Children, 2021; Sheehan et al., 2017; World Health Organization, 2017a).

The Triple Dividend in Relationship to Trauma and Futures Consciousness

The literature on the Triple Dividend rarely addresses trauma. When it does, it usually focuses on trauma care in emergency settings rather than on trauma's broader, long-term impacts on adolescent development and futures (Bosire et al., 2021; Das Gupta et al., 2014; United Nations, 2015 & World Health Organization, 2017). Yet, the literature on trauma in its various guises suggests it is a powerful undercurrent that will have an ongoing impact across all age groups and periods of the Triple Dividend.

Trauma-transformative foresight and the Triple Dividend in 2050

Embedded within the Triple Dividend is a natural foresight component. By taking a ten-to-twenty-year outlook, the WHO envisions a certain preferred future, but empirical evidence is lacking on the role trauma-informed foresight play in realising this future scenario of empowered youth, adults, and their children. Lombardo's (2007, 2011b, 2016a) introduction of several critical thinkers, futurist and historians can be used to imagine some of the drivers and trends that will influence the future of the Triple Dividend in 2050. Nisbet (1994) and Bertman (1998) posit that Western cultures have become disillusioned with ideas of progress and are now firmly situated in a "cult of the present" (Nisbet) or experiencing "cultural amnesia" (Bertman) that permanently marginalises the future, as well as the past. Best & Kellner (1997) and Zey (2000) argue that despair, disappointment, and nihilism have supplanted hopeful and positive images of future created by past generations. Any new vision of the future generated by the populations of the Triple Dividend will need to question the linear economic model embedded in the Triple Dividend (i.e., increased disposable income will automatically increase greater consumption, production, and investment—

all in hopes this will accelerate growth). However, as this study demonstrates, the impact of trauma can quickly truncate any generation's ability to critically engage with and proactively think about the future.

Conclusion

This study has demonstrated the value of trauma healing for youth and how it brings significant changes to their self-esteem and concern for others. GSN's future work with children and adolescents will add components to the role of mental health and trauma healing for the Triple Dividend. To paraphrase Boaventura de Sousa Santos' call, "There is no global social justice without global cognitive justice" (2016, p. 13), there will equally be no global triple dividend without global cognitive investment across the entire spectrum of trauma faced by children and adolescents, not only in Africa, but across the world.

Notes

[1] Within the humanitarian aid and development sectors, there is also reference to a triple dividend related to resilience (Tanner et al., 2015; Tanner & Rentschler, 2015). The underlying principle of a three-fold return is the same, but throughout this study, the triple dividend refers to adolescents and youth.

[2] GSN's work was supported by a grant from Grand Challenge Canada.

[3] Lombardo and Sande use "future" in the singular, while others (Seth, Ahvenharju, Lalot, Conway, Minkkinen, Quiamzade, and Carstens) use "futures" to describe this consciousness. I will use "futures" as it best captures the multitude of future realities and better aligns with contemporary uses in futures thinking, futures studies, futures literacy, etc.

[4] If we consider the term "future time perspective" as synonymous with "future consciousness", then the history, according to Richter (2003), goes back even earlier to the work of Lewin (1926, 1942), Frank (1939), Fraisse (1963), Nuttin (1963), and Kastenbaum (1961, 1964).

[5] One explanation is that the questions about how understanding of systems had changed were not worded to fully capture what "systems perceptions" entails. KIIs and FGDs demonstrated that participants had in fact increased their systems perceptions.

References

Ahvenharju, S., Lalot, F., Minkkinen, M., & Quiamzade, A. (2021). Individual futures consciousness: Psychology behind the five-dimensional Futures Consciousness scale. *Futures*, *128* (February), 102708.

Ahvenharju, S., Minkkinen, M., & Lalot, F. (2018). The five dimensions of Futures Consciousness. *Futures*, *104* (May 2017), 1–13.

Azzopardi, P. S., Hearps, S. J. C., Francis, K. L., Kennedy, E. C., Mokdad, A. H., Kassebaum, N. J., Lim, S., Irvine, C. M. S., Vos, T., Brown, A. D., Dogra, S., Kinner, S. A., Kaoma, N. S., Naguib, M., Reavley, N. J., Requejo, J., Santelli, J. S., Sawyer, S. M., Skirbekk, V., … Patton, G. C. (2019). Progress in adolescent health and wellbeing: tracking 12 headline indicators for 195 countries and territories, 1990–2016. *The Lancet*, *393*(10176), 1101–1118.

Benoit, R. G., & Schacter, D. L. (2015). Specifying the Core Network Supporting Episodic Simulation and Episodic Memory by Activation Likelihood Estimation. *Neuropsychologia*, *75*, 450–457.

Bertman, S. (1998). *Hyperculture: The Human Cost of Speed*. Praeger Publishers.

Best, S., & Kellner, D. (1997). *The Postmodern Turn*. Guilford Press.

Bosire, E. N., Ware, L. J., Draper, C. E., Amato, B., Kapueja, L., Lye, S., & Norris, S. A. (2021). Young women's perceptions of life in urban South Africa: Contextualising the preconception knowledge gap. *African Journal of Reproductive Health*, *25*(2), 39–50.

Bundy, D. A. P., de Silva, N., Horton, S., Patton, G. C., Schultz, L., Jamison, D. T., Abubakara, A., Ahuja, A., Alderman, H., Allen, N., Appleby, L., Aurino, E., Azzopardi, P., Baird, S., Banham, L., Behrman, J., Benzian, H., Bhalotra, S., Bhutta, Z., & Black, M. (2018). Investment in Child and Adolescent Health and

Development: Key Messages from Disease Control Priorities [Article]. *The Lancet*, *391*(10121), 687–699.

Campbell, K., Benoit, R., & Schacter, D. (2017). Priming, Not Inhibitions, of Related Concepts during Future Imagining. *Memory*, *25*(9), 1235–1245.

Clarke-Habibi, S., & Reimann, C. (2023). *Defining the Trauma-Awareness Spectrum in Humanitarian , Development and Peacebuilding Interventions*. LinkedIn. https://www.linkedin.com/pulse/trauma-awareness-spectrum-humanitarian-development-sara-habibi-clarke-2nlrf/

Conway, M. (2022). *Futures Consciousness*. https://foresightpresent.foresightfutures.net/futures-consciousness/

Cozolino, L. (2010). The Neuroscience of Psychotherapy: Healing the Social Brain (2nd ed.). W.W. Norton and Company.

D'Argembeau, A. (2012). Autobiographical memory and future thinking. In D. Berntsen & D. C. Rubin (Eds.), *Understanding Autobiographical Memory: Theories and Approaches* (pp. 311–330). Cambridge University Press.

Das Gupta, M., Engelman, R., Levy, J., Luchsinger, G., Merrick, T., & Rosen, J. E. (2014). The Power of 1.8 billion Adolescents, Youth and the Transformation of the Future. In *UNFPA*.

Demblon, J., Bahri, M., & D'Argembeau, A. (2014). Neural Correlates of Event Clusters in Past and Future Thoughts: How the Brain Integrates Specific Episodes with Autobiographical Knowledge. *NeuroImage*, *127*, 75–83.

Esbjörn-Hargens, S. (2009). An Overview of Integral Theory: An All-Inclusive Framework for the 21st Century (Resource Paper, Issue 1).

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults: The Adverse Childhood Experiences (ACE)Study. *American Journal of Preventive Medicine*, *14*(4), 245–258.

Fraisse, P. (1963). *The Psychology of Time*. Greenwood Press.

Frank, L. K. (1939). Time Perspectives. *Journal of Social Philosophy*, *4*, 293–312.

Hassabis, D., & Maguire, E. A. (2007). Deconstructing Episodic Memory with Construction. *Trends in Cognitive Sciences*, *11*(7), 299–306.

Herman, J. (1997). Trauma and Recovery: The Aftermath of Violence-from domestic abuse to political terror. In *Basic Books*. Basic Books.

Inayatullah, S. (1998). *Pedagogy, Culture and Futures Studies*. Metafuture. https://www.metafuture.org/pedagogy-culture-and-futures-studies-2/

Inayatullah, S. (2006). Anticipatory Action Learning: Theory and Practice. *Futures*, *38*(6), 656–666.

Inayatullah, S. (2008). Six pillars: futures thinking for transforming. *Foresight*, *10*(1), 4–21.

Inayatullah, S. (2020). A Castle Surrounded by Hungry Wolves: Toward a Stage Theory of the Uses of the Future: *World Futures Review*, *12*(1), 40–54.

Kastenbaum, R. (1961). The Dimensions of Future Time Perspective: An experimental analysis. *Journal of General Psychology*, *65*, 203–218.

Kastenbaum, R. (1964). The Structure and Function of Time Perspective. *Journal of Psychological Research*, *3*, 1–11.

Lalot, F., Ahvenharju, S., Minkkinen, M., & Wensing, E. (2020). Aware of the future? Development and validation of the futures consciousness scale. *European Journal of Psychological Assessment*, *36*(5), 874–888.

Letchford, L. (2020, September 21). *Trauma & Neuroscience: Part I* . https://www.loisletchford.com/blog-1/2020/9/21/trauma-amp-neuroscience-part-i

Lewin, K. (1926). Intention, will, and need. In D. Rapaport (Ed.), *Organization and Pathology of Thought*. Columbia University Press.

Lewin, K. (1942). Time Perspective and Morale. In G. Watson (Ed.), *Civilian Morale*. Houghton Mifflin.

Lichty, S., & Kamunya, F. (2022). The intersection of trauma-informed futures and the coloniality of sexuality:

building futures consciousness with Kenya's LGBTQI+ community. *Foresight*, *May*.

Lombardo, T. (2006a). The Evolution of Future Consciousness: the Nature and Historical Development of the Human Capacity to Think about the Future. Authorhouse.

Lombardo, T. (2006b). The Psychology And Value Of Future Consciousness.

Lombardo, T. (2006c). Thinking Ahead: The Value of Future Consciousness. *The Futurist*, *January-Fe*, 45–50.

Lombardo, T. (2007). The Evolution and Psychology of Future Consciousness. *Journal of Futures Studies*, *12*(1), 1–24.

Lombardo, T. (2010). Wisdom Facing Forward: What It Means to Have Heightened Future Consciousness. *The Futurist*, *44*(5), 34–42.

Lombardo, T. (2011a). Wisdom, Consciousness, and the Future: Selected Essays. Xlibris.

Lombardo, T. (2011b). Wisdom In The Twenty-First Century. *World Affairs: The Journal of International Issues*, *15*(1), 132–157.

Lombardo, T. (2013). The Psychology of the Future: Flourishing in the Flow of Evolution.

Lombardo, T. (2016a). Future Consciousness: The Path to Purposeful Evolution-An Introduction. *World Future Review*, *8*(3), 116–140.

Lombardo, T. (2016b). The Wisdom of Future Consciousness. 4(1), 1–23.

Lopez, B., Biren, N., Yoder-Maina, A., Beti, B., Spears, H., & Yassin, R. (2019). Growing Connection, Agency, And Resilience: The impact of community-led trauma-informed peacebuilding in response to violent extremism in Kenya.

Mullally, S. L., & Maguire, E. A. (2014). Memory, Imagination, and Predicting the Future: A Common Brain Mechanism? *Neuroscientist*, *20*(3), 220–234.

Ndungu, T. (2020, February 21). Out of 47.6 million Kenyans, 35.7 million are under the age of 35. *Citizen Digital*.

Nisbet, R. A. (1994). *History of the Idea of Progress* (2nd ed.). Routledge.

Novick, E. R., Kim, J. I., Mazloomdoost, Y., Barthle, C., & Hays, L. (2018). Adolescent Health: Think, Act, Grow (TAG)—A Strengths-Based Approach to Promoting Health in Youth. *Journal of Youth Development*, *13*(3), 97–110.

Nuttin, J. R. (1963). The Future of Time Perspective in Human Motivation and Learning. *17th International Congress of Psychology*.

Ornauer, H., Wiberg, H., Siciński, A., & Galtung, J. (1976). *Images of the World in the Year 2000*. De Gruyter Mouton.

Oxford Languages. (2022). *Unconscious definition*. Google.

Patton, G. C., Sawyer, S. M., Santelli, J. S., Ross, D. A., Afifi, R., Allen, N. B., Arora, M., Azzopardi, P., Baldwin, W., Bonell, C., Kakuma, R., Kennedy, E., Mahon, J., McGovern, T., Mokdad, A. H., Patel, V., Petroni, S., Reavley, N., Taiwo, K., … Viner, R. M. (2016). Our future: a Lancet commission on adolescent health and wellbeing. *The Lancet*, *387*(10036), 2423–2478.

Patton, G., & Temmerman, M. (2016). Evidence and Evidence Gaps in Adolescent Health. *Journal of Adolescent Health*, *59*(4), S1–S3.

Pouru-Mikkola, L., & Wilenius, M. (2021). Building Individual Futures Capacity through Transformative Futures Learning. *Futures*, *132*, 102804.

Ramos, J. (2016). Future of Work. STIR: The Magazine for the New Economy.

Rhemann, M. (2019). Deepening Futures with Neuroscience. *World Futures Review*, *11*(1), 51–68.

Richter, J. (2003). *The role of the future in student motivation* [University of Montana].

Sande, Ö. (1972). Future Consciousness. *Journal of Peace Research*, *9*(3), 271–278.

Santos, B. de S. (2016). Epistemologies of the South: Justice Against Epistemicide. Routledge.

Save the Children. (2021). Investing in the Now and the Future: Why governments must commit to adolescent health and nutrition.

Sawyer, S. M., Afifi, R. A., Bearinger, L. H., Blakemore, S.-J., Dick, B., Ezeh, A. C., & Patton, G. C. (2012).

Adolescence: a foundation for future health [Article]. *The Lancet*, *379*(9826), 1630–1640.

Schacter, D., & Addis, D. R. (2007). The Cognitive Neuroscience of Constructive Memory: Remembering the Past and Imagining the Future. *Philosphical Transactions: Biological Sciences*, *362*(1481), 773–786.

Sheehan, P., Sweeny, K., Rasmussen, B., Wils, A., Friedman, H. S., Mahon, J., Patton, G. C., Sawyer, S. M., Howard, E., Symons, J., Stenberg, K., Chalasani, S., Maharaj, N., Reavley, N., Shi, H., Fridman, M., Welsh, A., Nsofor, E., & Laski, L. (2017). Building the foundations for sustainable development: a case for global investment in the capabilities of adolescents. *The Lancet*, *390*(10104), 1792–1806.

Slaughter, R. A. (2008). Integral Futures Methodologies. *Futures*, *40*(2), 103–108.

Tanner, T, Surminski, S., Wilkinson, E., Reid, R., Rentschler, J., & Rajput, S. (2015). The Triple Dividend of resilience - Realising development goals through the multiple benefits of disaster risk management. 1–37.

Tanner, T & Rentschler, J. (2015). Unlocking the "Triple Dividend" of Resilience: Why investing in disaster risk management pays off. *Interim Policy Note*, 24.

United Nations. (2015). The Global Strategy for Women's, Children's and Adolescents' Health (2016-2030). In *United Nations*.

University of Turku. (2022). *The Scientific Basis*. Futures Consciousness Profile Database. https://futuresconsciousness.utu.fi/scientific-basis/

Waibochi, P., Lichty, S., Yoder-Maina, A., Gache, Y., & Mwachausa, M. (2023). Community-Led Headling Journeys: Reconciling the Past, Re-Engaging in the Present, and Redesigning the Future.

Wilber, K. (2001). A Theory of Everything: An Integral Vision for Business, Politics, Science and Spirituality. Shambhala.

World Health Organization. (2017a). Global accelerated action for the health of adolescents (AA-HA!): guidance to support country implementation adolescents.

World Health Organization. (2017b). Global Accelerated Action for the Health of Adolescents (AA-HA!): Guidance to Support Country Implementation.

World Health Organization. (2018). Adolescent Health: The missing population in Universal Health Coverage.

Zey, M. G. (2000). The Future Factor: The Five Forces Transforming our Lives and Shaping Human Destiny. McGraw-Hill.