

A PARTNERSHIP PERSPECTIVE ON ECOSOCIAL RECIPROCITY FOR CULTURAL TRANSFORMATION

Angelica Walton, Shawna Beese, Sherry Chesak,
Stephanie D. Gingerich, and Ryne Wilson

Abstract

With domination behaviors shaping our social structures, the reciprocal relationship that humans share with the ecological community has changed significantly over time. The concerning decrease in humans' sense of belonging and sustainable ecological practices are a threat to the health and wellbeing of all people and the planet. In this article, we propose that a paradigm shift is needed in the way we learn to embody holistic systems thinking and knowledge. We discuss a concept addressing the need for ecosocial reciprocity. We introduce the Ecosocial Partnership Framework for Learning that applies the values of partnership as fundamental for building safe and inclusive learning systems that can foster curiosity and the opportunity for embodied learning. The aim of this framework is to connect healthy partnership values to ways of being in reciprocal relationship with all members of the ecological community, as critical for the sustainability of our planet.

Keywords: Ecosocial, partnership, sustainability, health, embodiment

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The sustainable development of education, health, and environments to improve wellbeing has been an effort of world governments, social groups, and many disciplines for several decades (Naeem et al., 2016). Indigenous leaders and experts in anthropology, geography, urban studies, humanitarian, health, and environment-related fields continue to address the dynamic socio-structural influence of human

health and development on the ecological sustainability of our planet (Eizenberg & Jabareen, 2017). With increasing evidence connecting socioeconomically driven chronic stressors to rising rates of non-communicable disease (World Health Organization [WHO], 2022), further examination of social experiences impact on human behavior and health is needed. The relationship between social factors and many globally increasing complex conditions such as anxiety, post-traumatic stress disorder (PTSD) (Fitzgerald et al., 2022), and loneliness (Smith & Pollak, 2022) may also be linked to humans' sense of connection with the ecological community. The concerning decrease in humans' sense of belonging (United States (U.S.) Public Health Services, 2023) and disconnect with sustainable ecological practices (Tilman, 2012) are a threat to the health and wellbeing of all people and the planet. Parallel with the increased rates of stress-related disease and mental health suffering are patterns of human domination perpetually leading to violence, war (United Nations Human Rights [UNHR], 2024), and climate degradation (Intergovernmental Panel on Climate Change [IPCC], 2022). In order to transform the social structures that lead to domination behavior, we propose a paradigm shift in the way humans learn to embody holistic systems thinking and knowledge. This article introduces Walton's Ecosocial Partnership Framework for Learning (2024) as a concept grounded in Krieger's (2021) ecosocial theory, which draws a connection between healthy partnership values and ways of being in reciprocal relationships with all members of the ecological community.

Social sustainability is an ontology for conceptualizing the interrelationship of domination systems and social injustices that, until addressed, inhibit progress toward a more just, safe, and healthy planetary community (Åhman, 2013). In the current Anthropocene Era, sustainable development of human-informed structures is imperative to restoring balance within the planet (Wedmore et al., 2023). Crucial to this is a culture change in humans' ways of being in relationship with living beings, calling into question issues of accountability, agency, and a need for theory. Theory helps to draw connections between causation and action (Krieger, 2001). There is a need for common understanding and remembrance of humans' reciprocal relationships within the ecological system. We propose a theoretical discussion of ecosocial

reciprocity as a valued awareness of humans' embodied social connection with the ecological system that is critical not only for a culture of health where all beings are equals, but also for the sustainability of human health.

DEFINITIONS OF ECOSOCIAL RECIPROCITY

Through the Indigenous worldview, the interrelationship of humans and land has long been identified as *kin* or *relative* (Wildcat & Voth, 2023). Krieger's (1994) ecosocial theory brought forward the discussion of the embodied biological influence of population behavior patterns as related to individuals' social engagement with a changing biophysical world. A domination-based world can be exploitive and oppressive of individuals experience, influencing human biology over time through what Krieger (2021) refers to as pathways. Our embodied pathways are the knowledges and information experiences that our cells have stored, learned, and passed in cycles of time (Krieger 2021). Embodiment and place health research are concepts of public health that draw from the interdependent relationships of people's health with the environment (Petteway et al., 2019). Krieger (2021) describes the pathways as *embodiment truths*, "connections that exist between people, politics, ecologies, and health" (p. 24). This is understood as the stories, information, and/or memories alive inside our cells, passed through continuous ecological cycles. Through Indigenous relationality ontology and kinship worldview, reciprocity is explained as the ethics of understanding mutual relationships between social, ecological, and spiritual interconnections within a community (Wildcat & Voth, 2023). Reciprocity is also defined as the art of living in an intentional practice of giving and receiving (Wildcat & Voth, 2023). To live in ecosocial reciprocity means to fully connect with our role and agency in the cycles of life, both socially and ecologically: how we treat the land, the waters, ourselves, and one another.

Social dimensions of health are complexly webbed into the need for a sustainable ecology. As Krieger's (2001) *embodiment truths* outline it, our biocultural connection is embedded in behave and interact with the world. Connection is primal to our

biological needs as an evolutionarily social species (Olf, 2012). Oxytocin, a hormone important in the body's stress response process, is released during social experiences (Olf, 2012), and is essential to the body's capacity to recover from stress. This has potential implications that social connection is protective of health and that disconnection may serve as a threat to the sustainability of all ecological systems.

THE THREAT OF DOMINATION

Humans are one of an estimated 8.7 million species on earth (National Geographic Society, 2023), not counting the living entities of mountains, bluffs, and waters. Interestingly, as a species, we have assessed ourselves as the top tier of the ecological pyramid and normalized extractive behavior that is draining the earth of natural resources that ecological systems depend on. This is happening despite the estimated youth of humans within the ecological community. Some of the oldest species have existed on Earth for an estimated 890 million years (Turner, 2021). Plant life has recently been discovered to exist earlier than scientists once thought, with evidence of existence up to 500 million years ago (Giere & Schratzberger, 2023). In comparison, *homo sapiens* evolved as recently as 550,000-750,000 years ago (Rafferty, 2017). Individuals and communities today have evolved far from the land practices humans once had, such as awareness of the needs of the ecological system, eating whole foods seasonally, foraging, hunting, and pragmatically allocating resources (Sobo, 2016). Within the span of human presence on Earth, the practice of partnership with land has drastically diminished, and because of this, all planetary life has suffered (Sobo, 2016).

Biodiversity Loss

Domination as a paradigm transforms humans' interaction with the ecological environment, leading to colonization, biodiversity loss, destruction, and devastation of lands and communities (Tilman, 2012; Intergovernmental Panel on Climate Change [IPCC], 2022). At the macro scale, the impacts of domination on biodiversity alter marine, terrestrial, and freshwater ecosystems around the world and threaten the conditions in which life is able to exist (IPCC, 2022). Biodiversity is fundamental to the

symbiotic function of any ecosystem; all eco-environments interact in cycles of regeneration, which depend on the healthy exchange of diverse species, biomass, and compost in order to create environmental conditions for robust growth and development (Khangura et al., 2023).

From a cellular system perspective, the direct effects of domination on individuals' health can be seen in pathogen overgrowth of the gut microbiota, wiping out the bacteria needed for healthy system function (Ravi et al., 2019). When the microbiome is colonized by a pathogen, a myriad of complex disease patterns can occur, including skin disorders, immune dysfunction, anxiety, inflammation, pain, and psychosocial dysregulation (Vijay & Valdes, 2022). Like microbiota colonization, social cultures of domination also lead to diversity loss and therefore diminished environmental conditions (Loreau et al., 2022). Behaviors that lead to land domination, deforestation, and/or forced migration of communities, disrupt the innate interdependent connections of complex adaptive systems, and over time, change their function (Mostafanezhad & Norum, 2019; Cohen, 2021).

Community Disruption and Social Inequities

Social inequities are exacerbated by domination. They drive scarcity behaviors that lead to acts of violence, sometimes as severe as war and genocide, further displacing vulnerable persons, increasing health risk and harm the climate (Owen, 2020). The United Nations International Children's Emergency Fund (UNICEF) (2023) reports that there are 43.8 million displaced children across the world, 17.5 million of whom are refugees seeking asylum related to global failures such as war, climate disruption, and forced community displacement. By the end of 2022, more than 2 million Ukrainian children have had to flee their country (United Nations News, June 1, 2023). Conflicts between Israeli and Hamas forces in Gaza have led to the deaths of thousands of children (United Nations News, November 20, 2023).

The oppressive social disruption, for some, has harmed entire communities' cultural identity. For example, the Inuit community of Nunatsiavut has been forced to resettle

in Labrador, Canada related to the colonization of their land in the late 1700s and now melting snowcaps and ice glaciers related to climate change (Cunsolo Willox et al., 2013). Interference with the Inuit communities day-to-day land and culture practices have challenged their identity as people of the sea ice, caused deep suffering and increasing health complications (Cunsolo Willox et al., 2013). These are prominent stories of experiences of exploited communities across the world, and with each story comes a deep collective impact.

Collective Grief and Disconnection

Chronic stress associated with domination cultures burdens relationships and can lead to harmful social behavior patterns. As humans grapple with complex grief, loss, and constant exposure to the impacts of domination, concerns for stress, anxiety, loneliness, and disconnection are poignant. Disengaging and shutting down are innate survival responses to chronic stress exposure, such as seen in people who have experienced discrimination and lifetimes of social inequity. This is a dimension of burnout (Maslach & Leiter, 2021). In the disengagement response, humans often experience depersonalization, and decreased sense of connection, curiosity, and empathy (Maslach, & Leiter, 2021). Research in neuroscience links this state of dysfunction to chronic inflammation and impaired cognitive functions (Bayes et al., 2021). It is worth considering that the impact of such experiences extends far beyond the cognitive impacts to a fuller body experience: mental, emotional, spiritual, and physical. Social conditions of the human experience today, such as those intersected by economics, policy, infrastructure, and access to essential resources are contributing to rising complex, difficult-to-treat diseases and pose threat to ecological systems (Milner-Gulland, 2012; Ingalls & Stedman, 2017). The change in health and behavior of humans and related impacts on climate calls for a stark shift in the social patterns of humans' relationships with self, other, community, and place.

WELLBEING

Patterns of complex disease in all human, plant, and animal life have given rise to a new emphasis on the promotion of wellbeing in communities, workplace settings, and education systems. Wellbeing has remained a narrowly framed construct, and separated from the discussion of humans evolving away from their primal ecosocial relationships. Given the intersectional nature of the changing climate and the stress associated with domination in global ecosystems, wellbeing concepts must be approached through a place-based complex system perspective (Rong et al., 2023). To truly improve the sustainability and function of our whole global system to promote wellbeing, the interrelated risks of ecological determinants of health, such as social circumstances and the physical aspects of the environments in which individuals spend time, need more attention. One arm of this is research focused on causes of burdens to wellbeing within communities. A second arm is the development of frameworks that seek to address wellbeing concerns from structural system perspectives that empower agency.

EMBODIED LEARNING

Changes to humans' relationship with the ecological system has direct influence on physical feedback mechanisms, neural connectivity patterns, sensations, motor function, cell metabolism, overall sociocultural behaviors, interactions, and sense of agency (Danese & McEwen, 2012; Ramo-Fernández et al., 2017). This relationship process is what Krieger (2021) describes as the embodiment phenomenon; the direct effects of ecosocial complexities on human systems, behavior, and health. The embodiment phenomenon considers how the nature of lived experiences alter individuals' sense of consciousness and interoception, as in the perception of body signals (Musculus et al., 2021), social interactions, epigenetic expressions, and overall day-to-day body functions (Lux et al., 2021). To address wellbeing from a systems perspective and change behavior at structural levels, humans' remembrance of their relationship with the ecological community is important and calls for awareness of the intersectionality between sustainable social behaviors and health. We propose an

embodied approach to learning that considers the complex effects of stress and environment on cognition with the development of opportunities where individuals can learn through the full psychosomatic experience of remembering, expressing, connecting, and bonding.

THE PARTNERSHIP METHOD

Riane Eisler (2015) explains the partnership system as one based on mutual respect, accountability, and benefit. Partnership creates a path for cultures to transcend the challenges of supremacy and exist in a more equitable social organization where the needs of the most vulnerable are prioritized for the benefit of the greater collective (Eisler, 2015). In addition, the partnership approach creates an opportunity for us to learn from each other, share strengths, become empowered, respect accountability, and apply a robust pool of knowledge to our way of being in reciprocal relationship as a global community. Examples of how the values of partnership promote growth and resilience are evident in many functioning ecosystems. For example, the trees of forest communities lend mutual care when one is injured, by sending nutrients through underground mycorrhizal channels (Stobart & Piercy, 2023), and adjust their leaf canopies for sunlight to reach a sick stump (Wills et al., 2021). Rivers move fluidly across the earth, navigating around every obstacle that presents itself; the water adapts as needed, changes course, and maintains its interconnection with land. Water can be observed for its transparently giving biogeochemistry that it carries, providing carbon transfer from land to ocean, metabolizing and maintaining control of nutrient cycles, food web energetics, and biodiversity health of ecological communities (Battin et al., 2023).

Whether looking at the principles of partnership through the Indigenous worldview of *kinship* (Topa [Four Arrows], 2022), the UN principles of partnership for global peace (UN High Commissioner for Refugees, 2007; National Environmental Sciences Program [NESP] 2021), or Eisler's work (2017) in the social sciences, what remains consistently present within healthy systems are qualities of transparency, trust, respect, mutuality,

equality, interconnection, and co-creation. Applying the values and ethics of partnership to systems change has shown positive impact in times of stress; this can be examined through examples of communities who maintain their resilience even under significant adversities.

For example, Cuba has had to rely strongly on shared values of partnership in order to protect the health of its communities despite economic strains by the U.S. embargo, which limits access to food, medicine, and equipment (Tate-Beaver et al., 2024). The embargo has created many challenges for Cuba's National Health System and its people, but despite these circumstances, the culture's values of respect, mutuality, equity, non-violence, connection, community, and co-creation drive their success in health promotion and disease prevention. One way the Cuban culture has instilled these values at the structural level is through education. A literacy campaign in 1961 led the culture into a transformative paradigm of solidarity that serves as a strong foundation for the function of the Cuban Health System (Tate-Beaver et al., 2024).

Education can be the grounds for experiences that generate new visions. A learning system can serve as a medium in which the wisdom of both old and new can merge into something yet to exist. As the global community continues to grapple with the complex demands of our changing climate, prioritization of human connection and embodied remembrance of our ecosocial relationships are critical. Partnership is an organic quality foundational to the function of thriving ecological systems. Embracing with intention, the innate essence of partnership in humans' way of being, designing, and operating as social systems can support the creation of environments where individuals feel a sense of belonging and bonding, safe enough to be curious and explore different perspectives, and empowered enough to take action.

AN ECOSOCIAL PARTNERSHIP FRAMEWORK FOR LEARNING

An ecosocial partnership is regenerative. Its function is informed by foundations that provide structure for holistic growth and development, as evidenced by the interdimensional relationships within healthy, biodiverse ecological environments. To

build this into a framework for learning, the partnership values have been grouped into four core elements for establishing the grounds of the learning environment. A conceptual analysis of partnership in nursing (Yuan & Murphy, 2019) was used to envelop the partnership values into these four major qualities: Capability, Collaboration, Trust, and Empathy. These groupings are central to the ecosocial partnership model that can be seen in Figure 1.

Figure 1. *The Ecosocial Partnership Framework for Learning*



Source: Walton (2024)

Values

Within the learning framework, the four core values of partnership drive the central actions for setting the environment. The structure of the learning environment is one where all members of the interconnected system feel respected, capable, and welcomed as collaborators in the co-creation of the space. The setting is acknowledged as adaptable and able to be changed as needed. Accountability is a mutual

responsibility of all members of the community, and trust is fostered through non-violent ways of communicating and awareness of body language and gestures. With building trust comes the need for a relationship-based but individualized approach, which happens through the practice of equitable behavior and empathetic understanding. As seen in Figure 1, when these core values are embodied (modeled and practiced), we recommend that the learning environment is more conducive to the experience of curiosity that is needed for the cognitive and sensory capacity to embrace diverse perspectives.

Perspective, Curiosity, and Bioculturistic Learning

The Ecosocial Partnership Framework for Learning is grounded in ecosocial theory, which identifies biodiversity as critical to the sustainability of systems and delineates the intersection of sociocultural relationships as key drivers of health (Krieger, 2001). Definitions of bioculturism have varied across disciplinary fields. Anthropologists have defined the term as a holistic concept that acknowledges the relationships between biological characteristics of individuals and populations with both social and cultural factors (Hoke & Schell, 2020). Though, researchers within the discipline have argued that what bicultural anthropology does, which is allow for various ways of studying humans as both biological and cultural beings, is more important than its definitive definition (Hoke & Schell, 2020).

Biocultural diversity can influence community's health and patterns of genetic adaptation found within populations (Sobo, 2016). Similar to a thriving garden ecology made up of dynamic and reinforcing interactions between species, each member has a role to contribute for the optimal function, growth, and development of the system as whole. The Ecosocial Partnership Framework for Learning generates a conceptual base that expands curiosity and lends itself to embrace learning from multiple vantage points in order to transform the narrative that there is one dominant system more powerful than another, and rather that there are multiple differing, but co-existent systems within the larger planetary whole. Knowledge from globally diverse wisdom, science, and cultural traditions are paramount for engaging learners' curiosity and supporting their

growth and development toward a more holistic consciousness. The bioculturistic approach to concept understanding may better support a learner's relationship with their role and personal identity within a complex ecological system. An inclusive worldview may also have the potential to encourage more agency of learners to engage in sustainable behaviors that support ecosocial *reciprocity*.

Psychosomatic Engagement & Connection

Another dimension of ecosocial theory that the learning framework addresses is the emphasis on embodied learning and psychosomatic remembrance. The psychosomatic body is the interconnected system of mind, body, and emotional self; it is physiologically informed by the interactions of biological, psychological, and dynamic social environment factors (Fava et al., 2017). A regulated nervous system will produce a more optimal environment for learning (Fava et al., 2017). Interventions and strategies that support the interconnected whole of the psycho-spiritual-somatic self can range from therapeutic communication and reassurance to trauma-informed self-regulatory practices using the hands, body, and breath. Modeling the cultivation of a healing space externally also supports the learner in occupying a healing space internally.

Fostering a sense of community can have profound impacts on health (Lux et al., 2021). Community-based interactions take the impressions of individuals' unique lived experiences into collective account to engender the co-creation of a shared and supportive network for healing through an exchange of intentional relationships and acts of giving and receiving (Lux et al., 2021). The learning framework foregrounds that bioculturistic learning can be done by creating environments where individuals can psychosomatically experience social connection and bonding through creative interventions that engage cognition, emotion, and motor sensory cells. These can involve practices such as movement, touch, visualization, awareness, and others that support individuals in shifting between exteroception (environment sensing), proprioception (body's gravity sensing), and interoception (internal body sensing)

(Körner et al., 2015). In the learning environment this may involve music, visual art, sound, expressive film, poetry, and/or other interactive media.

Improved Partnership Practice

A bioculturistic approach to learning aims to support a more connected conceptualization of complex systems and holistic worldviews. With this vantage point, learners can feel more open and aware, with greater curiosity and compassion that may lend to less attachment to biases or dysregulated reactivity. If partnership values are honored, our relational capacity has potential to grow, in a time when cultures of trust, and reciprocity are deeply needed in our societies and systems. Opening perspectives to various ways of knowing and other truths may give humans the opportunity to remember the embodied role as kin to all within the ecological community. Bioculturism acknowledges the uniqueness within a whole system in a way that warrants a deep respect and value for all living beings. Becoming partners opens doors to a new future: a liberated global society based in intentionality. There is power in the reimagination of a world where the conditions that an ecological community needs to flourish are valued, with the understanding that those conditions might be different from the needs of our own. It is possible that when we operate from a place of shared values and respect, our sense of trust can grow to a place where humans are able to live with high regard for dynamic partnerships and differences.

CONCLUSION

The main premise that we propose through the Ecosocial Partnership Framework for Learning is a value-based awareness that humans' embodied social connection with the ecological system is critical not only for the sustainability of human health, but for the health of all beings as equals. This paper introduced a framework to support the cultivation of learning environments that can champion individuals to becoming better ecological partners. In order to promote health and enhance wellbeing, reframing our social sustainability behavior is vital. The ontological foundations that inform the framework encourage an active approach that can be iteratively evaluated as context

and interventions may vary based on the dynamics of the learning system, such as availability of resources. The contribution of this framework lies in the support it can provide in reframing the conceptual value and understanding of partnership as innate to healthy systems of reciprocity. The framework also provides a structure for empowering agency and the ability to apply these core values in practice through intentional efforts that allow humans to experience and remember the embodied qualities of capability, collaboration, trust, and empathy that sustainable ways of being in relationship with self and world depend on. To value the innate nature of our ecosocial relations is to ascend into a truly holistic understanding of our deep biological need for partnership and connection in sustaining the health and wellbeing of our planetary community.

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Dr. Angelica Walton is a Clinical Assistant Professor in the Population and Systems Health Cooperative unit at the University of Minnesota School of Nursing where she teaches about whole systems, global perspectives on healing, health innovation, and leadership. Her expertise and areas of work are at the intersection of sustainable wellbeing improvement and the art of social connection and community building. Her area of focus is supported by her doctoral studies in Integrative Health and Healing.

Dr. Shawna Beese is an Assistant Professor in the College of Agricultural, Human, and Natural Resource Sciences (CAHNRS), Extension at Washington State University. Her research focuses on rural health promotion and cultivating resilient communities.

Dr. Sherry Chesak is a Clinical Professor in the Population Health and Systems Cooperative Unit in the School of Nursing at the University of Minnesota and a Nurse Scientist at Mayo Clinic. She is a recognized nurse leader and scientist whose program of research is centered on care for the caregiver. She primarily studies mindfulness-based interventions that promote resilience and mitigate stress among clinicians and family caregivers.

Dr. Stephanie D. Gingerich holds a Doctor of Nursing Practice in Health Innovation and Leadership from the University of Minnesota and a Bachelor of Science in Nursing from the University of Iowa. She is a Clinical Associate Professor in the School of Nursing at the University of Minnesota. She spends much of her time serving the nursing community, her own community, and communities overseas through leadership roles.

Dr. Ryne Wilson is a Clinical Assistant Professor at the University of Minnesota School of Nursing. He is a trained systems thinker with extensive experience in care coordination, case management, interprofessional healthcare leadership, health policy, and advocacy. His work focuses on the intersection of oncology and planetary health.

Correspondence about this article should be addressed to Angelica Walton at waltonangelica@gmail.com.