

## Our Common Home: Embracing religious and spiritual tenets to advance a new model for environmental health research and education.



First Place: National Spirituality & Public Health Student Essay Contest

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### ABSTRACT

This essay poses a new environmental health (EH) research and education (R&E) model to include associations with religious and spiritual (R/S) tenets for engaging the public in environmental stewardship. Public health professionals have an obligation to research and educate the public on individual and community matters of EH including impacts of R/S tenets. EH as a public health discipline primarily focuses on scientific evidence related to negative health outcomes from toxicology and physical hazards for R&E. EH lags behind more progressive strength-based R&E models focusing on positive aspects of health promotion, environmental engagement, and stewardship to build public support and trust. This essay argues for an innovative EH R&E model to bring forward an environmental body, mind, and spirit framework for human health inclusive of R/S tenets.

### INTRODUCTION

Environmental health (EH) is a discipline within the broad field of public health, which primarily relies upon scientific evidence related to toxicology and physical hazards to educate society and shape policy on matters of public health [1]. EH relies upon the public health prevention / protection model focusing research and education (R&E) on risks associated with the fear of developing a disease [2, 3]. EH risk assessment emphasizes the dangers of chemical, biological, and physical hazards upon human health and safety [1]. Although these are noble pursuits, EH continues to side step its greatest opportunity to engage the public as environmental advocates by broadening the EH R&E model into a holistic assessment of body, mind, and spirit. This essay discusses religious and spiritual (R/S) tenets of: connection to creation, valuing sacred lands, and engaging in green fellowship as part of an expanded EH R&E framework to build public support and trust in EH's scientific findings.

## BACKGROUND

*Environmental Health:* EH is a discipline connected to exposure science and the intricate study of toxicants from environmental settings impacting human health [1]. Exposure science evolved from its association with the United States (US) Environmental Protection Agency (EPA), the US National Institute of Environmental Health Science (NIEHS), and National Institute for Occupational Safety and Health (NIOSH) for a focus on environmental and occupational hazards [4]. Examples of traditional routes of human exposure include: breathing in poor air quality, drinking contaminated water, ingesting spoiled food, or working at a noisy manufacturing plant [1, 4]. Long-term toxic exposures create latent health conditions that manifest later in life as permanent health damage associated with cancer and heart disease, among others (ibid).

Although hazards are essential areas of EH R&E, solely investigating the dangers of chemical, biological, and physical hazards limits EH's ability to go "beyond toxicity" [2, p.234] to engage the public in environmental stewardship. By example: to change from a society of smokers in the 1950's, it took a broad ecological health model informing the public about the health benefits of working and living in nonsmoking environments to advance health policy toward a society of nonsmokers in the 2000's [5]. However, on broader subjects of fossil fuels affecting air quality, or chemical manufacturing impacting water quality, EH has become a polarizing topic of believers and non-believers [6-8].

*Environmental Health Promotion:* Pender [9] developed the Health Promotion (HP) Model to examine health behaviors as motivation for sustaining health contrasting the health prevention approach based on human fear of developing a disease (ibid.). The environment is a key element within Pender's HP Model as a 'situational influence' impacting a person's relationship to other people (social) or places (physical) creating incentives or deterrents for taking health actions (ibid.). Pender's [10] 7<sup>th</sup> Edition expands the EH framework for a wider range of environmental settings impacting health including: housing density, land use, street patterns, sidewalks, and recreational facilities, as well as access to public parks and green space. Additionally, Pender includes spiritual growth as a HP behavior, and encourages nurse practitioners to administer patient spiritual assessment surveys as part of an inclusive overall health evaluation (ibid.).

*Religion, Spirituality and Health:* R/S and health outcomes have been connected throughout human history [11]. Religion encompasses beliefs, practices and rituals, while spirituality embodies humanism, values, and morals connected to a person's view of sacredness (ibid.). These R/S terms represent

qualities of transcendence – seeking information outside of oneself from a higher power. Tenets of transcendence are often expressed in association with: God, Allah, Brahman, Buddha, Christ, Dao, HaShem, or Higher Power, among others (ibid.). The US constitutionally recognizes separation of church and state leading to a bias to exclude R/S tenets within R&E for medicine and public health, even though 93% of Americans believe in some form of higher power [12]. R/S norms are associated with positive health influences such as coping with adversity and exhibiting positive emotions, as well as promoting well-being, happiness, optimism, and self-esteem [11, 12]. Additionally, R/S norms are associated with reducing depression, anxiety, substance abuse, marital instability, and crime (ibid.). Further, R/S has been shown to influence better outcomes for persons suffering from cardiovascular disease, hypertension, dementia, and cancer (ibid.). Yet, there is minimal information about R/S tenets influencing environmental and occupational health outcomes.

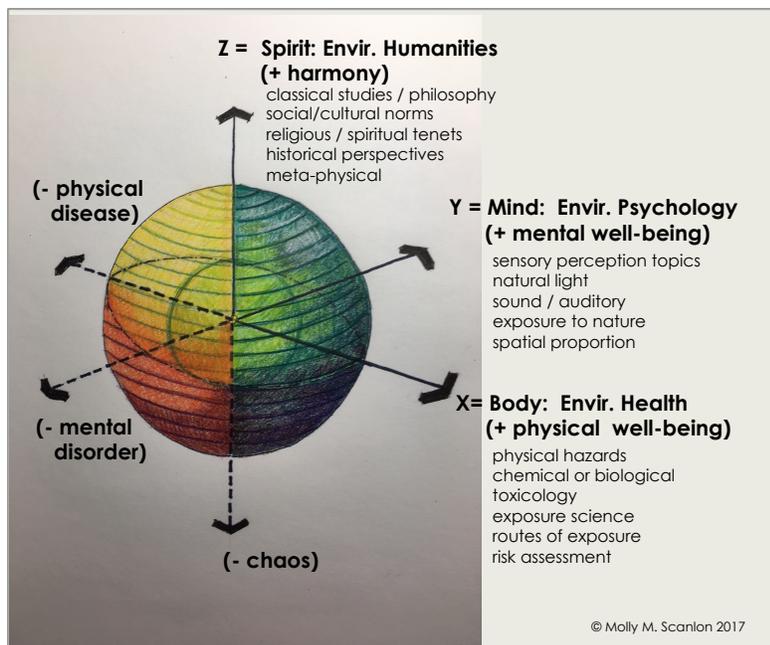
*Status of Environment and R/S Tenets:* EH topics are often discussed using negative terminology like climate change or water toxicology [2, 6]. These macro-scale topics are challenging science for the common person to grasp. However, it is known that a healthy lifestyle requires a supportive surrounding physical and social environment [10, 12, 13]. Still in the US, environmental challenges have become politically charged with division lines falling along extreme liberal (act immediately) versus conservative (it's a hoax) viewpoints [6, 14]. As for R/S communities a chasm in Christian bioethics between medical and environmental knowledge has polarized individuals and faith-based institutions (ibid.). Prevailing R/S arguments focus on beginning and end of life issues (contraception, in-vitro fertilization, genetics, abortion, euthanasia, and extraordinary methods of maintaining life), while there is minimal effort to align with ethics about creation and maintaining a healthy planet during our time here on earth [6]. These disparate viewpoints breed environmental skepticism rather than environmental engagement.

## **CHALLENGE**

Environmental health R&E needs a dynamic innovative model to build public support and trust in its scientific findings [4]. The National Academics (NA – national advisors on science, engineering and medicine) admit a knowledge gap exists in exposure science calling for new tools and strategies for a new vision of ecosystem protection (ibid.). The NA's strategic vision suggests terms of "eco-exposome" [4, p.12] and intricate diagrams detailing environmental impact on "the target" [4, p.25]. The NA's R&E model lacks a balanced risk/benefits framework and clear terminology, as well as no recognition of R/S tenets influencing health outcomes.

Alternatively, I propose a more humane and simplistic multi-dimensional EH R&E model incorporating an integrative health framework. Figure 1 illustrates an environmental sphere of knowledge organized into three axes – body, mind, and spirit. The body axis (X) represents topics associated with exposure through the traditional human body routes of exposure – ingestion, inhalation, injection, and dermal. The mind axis (Y) incorporates topics from environmental psychology (exposures impacting sensory perception) representing mental well-being versus disorder. The spiritual axis (Z) addresses environmental humanities including classical studies, philosophy, social/cultural norms, and religious/spiritual tenets. Moving toward a holistic EH R&E model will capitalize on more opportunities to inform, engage, and build public trust in EH’s scientific findings.

Figure 1: Environmental Sphere of Knowledge: A Research and Education Model Emulating an Integrative Health Approach – Body, Mind, & Spirit



### DISCUSSION: ENGAGING Z - THE HUMAN SPIRITUAL AXIS

The present essay poses the Z Axis – Spirit /Environmental Humanities as an exemplar of how R/S literature discusses tenets of: connection to creation, valuing of sacred lands, and green fellowship to encourage environmental stewardship to build public support and trust in EH’s scientific findings.

**Connections to Creation:** When Pope Francis published his encyclical *“Laudata Si’ On Care of Our Common Home”* he called upon all nations and those of the Catholic faith to see our environment as a



source of holistic health and part of the greater common cause for humanity [8, 14]. The Creator formed the world and our surrounding environment (ibid.). Society is the environmental caretaker to protect, oversee, and preserve the planet to assure its existence beyond oneself for the whole of mankind (ibid.). Harper and Kennealy [15] advocate for connections to creation through an eco-theological initiative. Eco-theology envisions building environmental awareness within faith-based institutions complementing core spiritual beliefs of creation (ibid.). Eco-theology encourages “greening our faith” [15, p.619] through spiritual worship, religious education, and spiritual practice (ibid.). Other eco-theology aspects focus on environmental justice accentuating EH impacts in low-income and marginalized populations (ibid.). Randolph [6] suggests alignment between EH and creation as a way to shift Christian bioethics to remove barriers between human and environment health. Christian medical ethics focus on individual person health outcomes while ignoring environmental ethics impacting health (ibid.). It’s a disconnect, which Randolph claims can be bridged with a “bigger tent” [6, p.164] of specialized EH topics, as well as collaboration on common areas of interest.

***Valuing Sacred Lands:*** Conducting studies involving keeping sacred land for indigenous people’s health creates valuable community partnerships to advance EH R&E beyond urban settings. Indigenous people from around the globe consider Earth as sacred [7, 13]. Indigenous people use familial nomenclature to express humans as guardians of Mother Earth, Father Sky, Sister Moon, and Brother Sun [7, 8]. These are not pagan titles, but rather respectful references of our environment as integral elements of family life [8]. Contrary to colonial concepts of land conquest and exploitation, the Indigenous Environmental Network promotes sustainable living within indigenous territories including energy, climate, water rights, and food sovereignty [7]. Destroying and separating from sacred land adversely impacts native peoples health by reducing life expectancy [13]. Western policies of separating land management and health policy interfere with holistic concepts of living in unison with sacred lands for Pacific Islanders, American Indians, and Alaskan Natives [7].

Indigenous territories are often located in remote areas (ibid.). These remote lands have become dumping grounds for waste by-products associated with mining companies, mineral extraction companies, and industrial agriculture (ibid.). Indigenous people have developed cancer and other life threatening diseases from radioactive uranium waste (ibid.). They feel targeted as politically isolated communities, while the industrialized world falsely believes technology fixes any problem (ibid.).



Indigenous nations are demanding a seat at the EH table to assure economic development and preservation of culture and sacred land are pursued in harmony and not mutually exclusive to capitalistic interests (ibid.). They support green energy and leveraging wind and solar resources (ibid.). Indigenous nations are tired of the long history of colonization, which destroyed ‘traditional’ knowledge about food, labor, forests, water, and ideology to benefit mankind, while violating sacred lands (ibid.).

**Green Fellowship:** Encouraging action at a local level helps R/S individuals embrace a lifestyle to encourage environmental stewardship. New Jersey Jewish and Christian leaders came together from diverse religious perspectives using their link to a common environment [16]. Their efforts spawned GreenFaith ([www.greenfaith.org](http://www.greenfaith.org)), a grass roots fellowship movement, emerging from a void of environmental knowledge for spiritual leaders in seminaries, universities, and other learning institutions (ibid.). GreenFaith has grown into a certification program for spiritual environmental engagement for energy conservation, member recruitment, and accomplishing bigger community goals than one congregation might achieve alone (ibid.).

Koenig [12] points out investigating how R/S impacts health outcomes allows for development of secular interventions for universal benefit (ibid.). For example, Jon Kabat-Zinn’s translation of mindfulness practice and tenets from Buddhism were re-introduced as a secular intervention called mindfulness based stress reduction (MBSR) [18]. MBSR has been tested in children, adults, and healthcare workers as a method of coping with stress (ibid.). Similarly, Bioneers ([www.bioneers.org](http://www.bioneers.org)) is a non-profit, secular organization focusing on practical visionary environmental solutions mimicking natural science fostering an inclusive environment for all faiths [17]. The Bioneers Indigenous Knowledge Program promotes “spiritual connectedness between all creations, their right to exist, and the value of their contributions to the larger whole...coexistence relies on the ability of all peoples’ and living things’ voices be heard and heard equally” [17, web p. Bioneers Indigeneity Program].

## **CONCLUSION**

This essay finds an innovative and dynamic EH R&E inclusive of R/S tenets worthy of further study as a method to build public support and trust in accepting EH’s scientific outcomes. Public health professionals have an obligation to research and educate the public on individual and community matters of environmental health including impacts of R/S tenets [4]. EH as a public health discipline currently focuses on scientific evidence related to negative health outcomes from toxicology and

physical hazards [19]. R/S literature suggests a public interest in environmental stewardship through connection to creation, valuing sacred lands, and engaging in green fellowship [7, 8, 15].

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