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SECTION 2

Research ARTICLES

Sun Salutations during the Winter Solstice in Planet Earth's Southern Hemisphere

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ABSTRACT

The article examines the cultural and spiritual significance of sun salutations during the winter solstice in the Southern Hemisphere, focusing on the historical reverence for the sun across various civilizations, including the Egyptians, Aztecs, and Chinese. It highlights the sun's role in spiritual and religious traditions, proposing that sun worship is one of humanity's oldest religions. The study integrates modern practices like yoga and breath work, emphasizing their benefits in reducing stress and enhancing well-being. Utilizing a phenomenological approach, the research combines poetry, photography, and Artificial Intelligence (AI) analysis to explore the symbolic and emotional connections between the sun and human experience. Participants contributed poems, haikus, narratives, and photographs, which were analyzed using AI tools to enhance data interpretation. The analysis revealed themes of rebirth, renewal, introspection, and spirituality, underscoring the sun's transformative power and its metaphorical role as a divine presence. The findings indicate a positive sentiment, with the sun depicted as a source of hope, renewal, and spiritual connection. Themes such as growth, resilience, and tranquility suggest that sun interactions evoke feelings of calmness and reflection, promoting mental well-being. The study highlights the potential of AI in qualitative research, offering a novel approach to understanding human experiences and emotions. It concludes by acknowledging the sun's multifaceted influence on human experience and the potential for AI-generated content to enrich the exploration of natural phenomena and their impact on spirituality and healing. Future research aims to further explore the interaction between nature, poetry, and AI in understanding human emotions and cultural heritage.

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Section 2. Earth Sciences, Ecology, Environment & Theology

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I. INTRODUCTION

Firstly, we would like to express our gratitude to Cosmin Ciocan and Tina Lindhard for establishing and introducing us to DIALOGO conferences and Journal, which offers an academic home for our writings. This contribution titled “Sun Salutations” is intended as a response to the provocative theme of the November 2014 – 2024 Dialogo Conference, i.e. Novelty vs. Heritage: Navigating the Tapestry of Human Evolution. This response itself is a provocative hypothesis that sun reverence or worship is the oldest religion (“Sun Worship” 2024). This hypothesis is supported by converging lines of evidence from various wisdom, spiritual and religious traditions where Africa is generally recognized as the cradle of humanity (Rito et al. 2019).

II. LITERATURE REVIEW

Sun worship in various forms is evident throughout recorded history, such as the Latin “sol” and the Greek “helios.” Examples include the Egyptian “Ra,” the Vedic “Surya,” the Congo’s sky father “Nzambi Mpungu,” the Aztec “Ollin Tonatiuh,” the Incan “Inti,” and the Chinese “Tai Yang Gong” or grandfather sun. The Egyptian sun god Ra was a dominant figure among ancient gods, maintaining this position early in the civilization’s history. The sun god’s journey over the heavenly ocean began as the young god Kheper, appeared at noon as the full-grown sun Re, and set in the west as the old sun god Atum. Pharaoh Ikhnaton reformed Egyptian religion by adopting the cult of the ancient deity Re-Horakhte under the name Aton, glorifying the sun’s qualities as creator and nourisher of the Earth.

The sun god held a central role in Sumerian and Akkadian religions, although neither the Sumerian Utu nor the Semitic

Shamash was among the top three gods of the pantheon. Among Indo-European peoples, the sun was a popular deity and a symbol of divine power. In the Vedas of ancient India, Surya is revered as an all-seeing god who dispels darkness, evil dreams, and diseases. Indian mythology features sun heroes and sun kings, with Vivasvant, the father of Yama, corresponding to the Iranian Vivahvant, the father of Yima. Medieval Iran celebrated sun festivals as a legacy from pre-Islamic times. The Indo-European character of sun worship is reflected in the solar deity, often depicted in a chariot drawn by four white horses, a motif common in Indo-Iranian, Greco-Roman, and Scandinavian mythology. Stonehenge, a prehistoric stone circle in southern England, is a site where revelers gather to worship the sun during the summer solstice, contrasting with the winter solstice. Britannica notes that cultures with solar religions often viewed the sun as the circadian ruler of both the upper and lower worlds, symbolizing day and night.

Animism, often misunderstood as simple human projection, is more complex. Greek mythology celebrates the Titans, depicting a world populated by divine beings. Christian animism emphasizes relationships characterized by divine love, transforming the Old Testament commandments into loving God and neighbor. The sun bestows light and life to the cosmos, ensuring justice and wisdom. These qualities are central to elite religious groups, with kings claiming descent from the sun. Solar deities, personifying the sun, are sovereign and all-seeing, often linked to the Supreme Deity. In African cultures, the sun symbolizes the divine, life, and energy, often incorporating birds in its analogy. The soul of the dead is free to wander but must return before sunset. The sun also predicts weather, with fog or mist indicating the rainy season and extensive heat during the day presaging heavy rains.

a) Traditional poetry and music.

Traditional poetry, a timeless art form that has been practiced for centuries across various cultures, serves as a vessel for the human experience, encapsulating the myriad emotions, thoughts, and narratives that define our existence (Ndlovu 2020). It is a medium through which poets have historically conveyed their deepest reflections, societal critiques, and personal revelations, often employing intricate structures, rhymes, and meters that add a musical quality to the words. Ndlovu (2020) states that poetry must be allowed to “speak for itself” in terms of sense and meaning-making and can at times, act as a healing practice. Traditional poetry forms, such as sonnets, haikus, odes, and ballads, each with their own set of rules and conventions, have been passed down through generations, evolving yet retaining their essence. These forms not only provide a framework for poets to craft their work but also offer readers a familiar structure to engage with history and cultural heritage, express emotions and ideas or comment on social and political issues. Through its use of metaphor, simile, alliteration, and other literary devices, traditional poetry invites readers to delve into layers of meaning, encouraging a deeper understanding of the human condition and the world around us. Its enduring relevance lies in its ability to transcend time, resonating with audiences across different epochs and cultures, and serving as a testament to the power of language to evoke emotion, provoke thought, and inspire beauty. Popular music often refers to the sun in celebration, such as Cohen’s (2004), “Morning Glory”, and “Nightingale” and the song covered by Nina Simone “New World Coming” (Well & Mann, 1971) resonating with optimism and change. Lucille Star’s “Quand le soleil dit bonjour aux montagnes” refers to cycles of sunset and sunrise (Pease and Vincent 1965).

b) Haiku.

Haiku is a form of traditional Japanese poetry that has been practiced for centuries, emerging from the genre of poetry known as “tanka.” Traditionally, a haiku is composed of three lines with a specific syllable pattern of 5-7-5, totaling 17 syllables. This concise structure contrasts with longer forms that may not adhere to such strict syllabic constraints. The haiku often encapsulates a moment in time, focusing on the natural world, the seasons, or the juxtaposition of two images or ideas. It is characterized by a cutting word or “kireji”, which serves to separate, used to create a pause or break within the poem. This pause serves to separate the poem into distinct parts and juxtapose the two parts of the poem, creating a moment of pause or reflection. The haiku does not traditionally use rhyme, and it aims to evoke a deeper meaning or insight beyond the literal description, often through the use of subtlety and understatement. The combination of brevity, syllable count, and thematic focus makes the haiku a unique and challenging form within the broader landscape of poetry. Salsabila and Masrokha (2023), identified emotive, poetic, multilingualism, fatigue and expressing a desire (in engaging the reader to think or act), as language functions exhibited in haiku poems. This form of poetry is deeply rooted in Zen Buddhism, emphasizing the importance of observation, mindfulness, and the transient nature of existence (Sobota 2008).

c) Yoga and breath.

Edwards (2011) references several spiritual actions, such as Surya namaskar (10 sun salutations postures performed with synchronized breathing) and other Eastern and African healing traditions that incorporate sun-related activities, especially when enhanced with One Breath consciousness. Breath work in yoga has

been connected to improved immune function, and psychologically related stress-disorders (Zope and Zope 2013; Johnson 1948; Edwards 2012). Phansikar and Mullan (2022) investigated the effects of a single session video-guided sun-salutation exercise on psychosocial stresses such as stress and anxiety resulting in significant reductions in state and anxiety and stress compared to other groups. The group also showed enhanced self-efficacy, improved engagement and flow, as well as scoring higher on positive affect during engagement in yoga postures.

Christian animism states that all animate and inanimate objects possess a soul or spiritual essence, offering poets a unique perspective on the interconnectedness of all things and the spiritual significance of the everyday. Phenomenology can be used to explore the lived experiences of individuals who practice Christian animism, providing a framework for understanding the subjective meanings and experiences of spirituality and the sacred in the natural and material world. Poets might draw on animistic beliefs to create works that evoke a sense of wonder, reverence, and connection to the divine.

d) *Autophotography*

Autophotography is a visual method for understanding human experiences that requires participants to take photographs of their environment that can be used as actual data (Glaw et al., 2017; Spiegel et al., 2020). This allows for enhancement of enriched data by adding layers of meaning, depth and creating knowledge. Participants are allowed to express their ideas in a nonverbal manner and is used in mental health research as a new, unique and innovative methodology. Contemporary photographic technology has enabled humanity people to take photographs of the rising sun. Early morning walkers and runners in Umhlanga are regularly observed

in such activity by one of the participants. Catissi et al., (2023) exposed cancer patients to images of nature and found that most participants experienced an improvement in positive affect and an 80% reduction in negative affect and the side effects of cancer treatment. Another study (Glaw et al. 2017) found that photo elicitation can generate data and knowledge.

Guo et al., (2023) compared 40k responses from ChatGPT-generated and human expert-generated content to the same questions and answers and found ChatGPT responses to be more useful than human responses, in especially the psychology domain. The authors of this study also found that ChatGPT responses were more organized, less biased and more comprehensive than the human responses, but that detection systems were able to spot the ChatGPT content easier. The conclusion was that ChatGPT was capable to generate human-like rich content containing emotional expressions.

III. METHOD

Firstly, we need to state upfront that our contribution inevitably reflects our occupational bias as psychologists working in the broader mental health field. Grounded in embodied and reflective experience, both personal and shared, the method that is used in this contribution may be described in terms of phenomenology, Christian animism and poesis. It is heuristic and phenomenological in approach, in attempting to suspend assumptions and bracket any bias to allow phenomena to reveal themselves in their original reality. This is a vital first step in any investigation, meditation, art, science or other domain. For gifts of awareness, sentience, consciousness and poesis must operate optimally in an open heart and open mind. Poetry, in turn, can express the ineffable qualities of phenomenological

experiences and the nuanced beliefs of Christian animism. Through poetic language, writers can capture the essence of spiritual encounters, the awe of nature, and the depth of human emotions in a way that transcends rational explanation. Humanity's original spirituality and wisdom traditions such as Christianity, provide leverage in transforming the scientism, technocracy and violence that characterize contemporary planet earth.

The methodology included experiences, poems and sun related photographs submitted by the authors to enrich or support their narrative data, all of which was supplemented by human and AI collaboration (Pataranutaporn et al. 2022). As such different layers of meaning and beliefs can be discovered as the sun is viewed through the eyes of the participants (Glaw et al. 2017). The three authors particularly submitted poems, narratives, haikus and photographs in celebration of the sun in their daily encounters. These consisted of a diary entry, nine poems, nine haikus and eighteen photographs. Atlasti.24 ("Atlas. Ti Sientific Software Development GmbH" 2024) was used to analyse the text data qualitatively.

The poems were collated in a document and formatted in plain text (.txt). All pictures and non-relevant text were removed. The photographs were submitted to PopAI (PopAi: Your Personal AI Workspace, n.d.), with a simple instruction: "Please give a qualitative, narrative, analysis summary in English of this image (*one sentence description when, where and what is depicted in image*), and the emotions it could evoke in the viewer, reflecting on how it could influence their mental health experiences." To generate synthetic data for the photographs (Hassani and Silva 2023), the authors familiarized themselves with the content through reading it several times before narratives were combined in a .csv file and cleaned using OpenRefine

(Hill 2016). A summary of all the poems, and photographs, development of codes for the data and the extraction of themes and word frequencies were generated using the AI coding function in Atlas.ti ("Atlas. Ti Sientific Software Development GmbH" 2024). Focus was also on examining the emotional and sentimental responses the poems evoked (Figure 2). Tools such as "Query Codes", and "Content Analysis" ("Atlas.Ti Sientific Software Development GmbH" 2024), were used during coding. Further, Intentional AI analysis were done on the emotions expressed: using keywords such as "anticipation", "attraction", "curiosity", "encouragement", "warmth" and "wonder" (Figure 3).

AI software was used to enhance clarity and coherence of the data. The text data was cleaned through tokenization, stop-word removal and stemming (Hill 2016), preprocessing, model training and result interpretation was employed using ChatGPT ("ChatGPT (" 2023; Hassani and Silva 2023)).

A. Data analysis.

The use of Artificial Intelligence (AI), (PopAi: Your Personal AI Workspace, n.d.) tools can improve the consistency and objectivity of the coding process whereas manual coding may introduce biases or inconsistencies, especially in large-scale qualitative research projects. This method was chosen due to its novel and innovation application and to discover distinct strengths and weaknesses in the human/AI collaboration (Metcalf et al. 2021). The analytical method consisted of eight steps (Glaw et al. 2017). Poems and photographs were submitted by the authors, data were organized, coded and structurally analysed. Then a detailed and interpretive analysis was performed, before themes were extracted and the write-up occurred.

Atlas.ti ("Atlas.Ti Sientific Software Development GmbH" 2024) and PopAI

("PopAi: Your Personal AI Workspace" n.d.) were used to organize and analyze the 15 poems submitted by the authors. The poems were collated in a document and formatted in plain text (.txt). All pictures and non-relevant text were removed. The photographs were submitted to PopAI (PopAi: Your Personal AI Workspace, n.d.), with a simple instruction: "Please give a qualitative narrative analysis summary of this image (one sentence description when, where and what is depicted in image), and the emotions it could evoke in the viewer, reflecting on how it could influence their mental health experiences in English." The authors familiarized themselves with the content by reading it several times before narratives were combined in a .csv file and cleaned the text using OpenRefine (Hill 2016). A summary of all the poems, and photographs, development of codes for the data and the extraction of theme's and word frequencies were generated using the AI coding function in Atlas.ti ("Atlas.Ti Scientific Software Development GmbH" 2024), focused on examining its the emotional and sentimental responses the poems evoked (Figure 2). Tools such as "Query Codes", and "Content Analysis", were used during coding. Further, Intentional AI analysis were done on the emotions expressed: using keywords such as "anticipation", "attraction", "curiosity", "encouragement", "warmth" and "wonder" (Figure 3).

Reviewing the results are always necessary when using AI tools as results may contain elements of bias or errors due to the limitations in training data or algorithms. The same data were submitted to two AI generative software tools to ensure accuracy, trustworthiness, credibility and confirmability and compared to the Atlasti.24 generated information. This methodology is new and innovative for mental health researchers. Insights from the theme extractions, sentiment and

content analysis were combined to form a comprehensive understanding of the poems. A summary of findings were then compiled and the data was reviewed and revised to ensure support and accuracy of the data.

We need to clearly state the preliminary, pioneering and subjective limitations of our study. It only contains interpretation of poems and photographs submitted by three participants. Narratives of the photographs were generated with AI through a simple prompt. The limitations, errors and biases of AI is well documented and the results must be read with this caution in mind.

IV. RESULTS AND DISCUSSION

Results showed that the use of AI to explore the narratives, enhanced the data through creative interpretations and articulation (Pataranutaporn et al. 2022) and pattern prediction capabilities.

A. Thematic Analysis

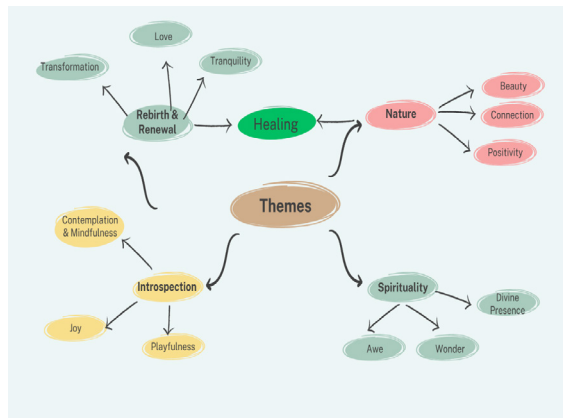


Figure 1: Thematic summary of poems and photograph analysis (Canva 2024)

A golden thread throughout the poems is weaved conveying growth, resilience, nurture and spirituality, suggesting a spiritual or divine connection that brings about a positive change in perspective. The reflective and uplifting tone, focus on the

beauty and deeper meanings that is created in the natural cycles of life and the human experience. The poems are structured as a series of poetic and prose passages, narrative poems, personal reflections, haikus, and descriptive passages which are organized thematically, different aspects of the sun's influence and symbolism.

Atlas.ti ("Atlas.Ti Scientific Software Development GmbH" 2024) summarized the photograph narratives echoed various serene beach and sunrise scenes evoke feelings of calmness, hope, and reflection, promoting mental well-being, resilience, and personal growth. The images symbolize tranquility, new beginnings, and harmony with nature, encouraging contemplation and optimism. They highlight the beauty of nature, the significance of self-care, and the importance of gratitude, mindfulness, and community support for improved mental health and emotional balance.

The summary for the combined poems reflected on transformation, waiting, the beauty of nature, and spiritual connections with the sun and the divine. The themes include growth, patience, self-reflection, and appreciation for the world around us.

Main Theme 1: Rebirth and renewal

Sub-theme 1: Transformation is reflected in several poems and images, where light brings forth change: To Father Sky and Mother Earth, ("Life brings forth in little cries"), The Symbolic Sun, ("and the mist rise"), and Day 236: National Shutdown Morning Shadows & Light, ("Standing in the light of the Son we magically transform"). The transformation of a sunflower (in Sunflower), from a buried seed to a radiant bloom, symbolizes the potential for growth and renewal within darkness and despair. The text contrasts light and darkness, both literally and metaphorically, suggesting that light brings about transformation and reveals hidden beauty and strength. The image of the sun rising over the Sea Point Promenade reflects the power and

beauty of a new day breaking over the horizon. Image 6 also echoes the promise of renewal.

Sub-theme 2: Love is reflected in the endearing term in DAY 236: National Shutdown Morning Shadows & Light, "early morning hike with my Jozi girls"; Sunrise Fried Fish, "Your heart's desire is to be available to those you love" and To Father Sky and Mother Earth, "And the parents love the children". Image 4 evokes nostalgic emotions tied to shared experiences, bringing forward the warmth of human connection.

Sub-theme 3: Peace and tranquility are evoked in the calmness of sunrises and sunsets as in Morning Artist, "Gently stroking in the soft sunshine minute by minute the skies burn bright", Sunrise "Did you ever see a sunrise?" and Beautiful Sunset Considerations, "Perfectly peaceful solitude". The document elicits a range of emotions, from the initial sense of despair and neglect in the sunflower poem to the warmth and comfort found in the narrative about Jesus and His disciples. The reflections on sunrise and sunset inspire awe and wonder, while the playful "Hide and Seek" poem brings a sense of joy and lightheartedness. The haikus evoke a sense of the vastness and beauty of nature, and the final poem on sunset considerations invites a feeling of peaceful solitude. Images 1, 2, 4, 10, 13, 15 and 16 reflect on the tranquility that comes with sunrises and sunsets.

Theme 2: Introspection

Introspection is considered to be a valuable psychological tool, encouraging participants to connect deeply with their inner selves through reflection. It focused the participants to self-reflect by examining their thoughts, feelings and experiences to gain a better understanding of their emotions.

Sub-theme 1: Playfulness is captured in Sunflower, "Until, magically or so it seems,

your first shoots spring up”, Hide and Seek, “She suddenly stands majestically splendid” and in Haiku Three, “Fields ablaze with life”. Image 1 claims that the expansive view of the ocean and prompt introspection, reflection and calmness. Images 3 and 9, evokes a range of emotions from melancholy to introspection and self-awareness.

Sub-theme 2: Contemplation and mindfulness is evident in Haiku 5, “Only when the sun decides to peak through the clouds”, Hide and Seek, “Hide and seek with her in the silence of my heart”, Sunflower, “now see who you are becoming.” “Sun Salutations” shares “the warmth of your morning gaze falls softly on my waking face”. Mindfulness is a theme throughout the narratives of the photographs. In Image 6, 7, 11, 14 and 15, reference is made to fostering mindfulness to reduce stress and anxiety.

Sub-theme 3: Joy is experienced in all the poems, Haiku 3, “Fields ablaze with light”, Beautiful Sunset Considerations “of drinking dive-bombing bats”, Morning Artist, “Singing hallelujah, morning has broken” as well as Sun Salutations “To you, one is soul nature, we belong Together we all shout a morning hallelujah”. Most of the photographs reflect on joy in the beauty of the scenes, Image 2, and 12 particularly capture exuberance.

Theme 3: Spirituality

Spirituality threads through most poems, such as in Sunrise Fried Fish, “They come to you tired and troubled You smile gently soothing their weariness”, The Symbolic Sun, “Religion of traditional devotion” and in Sunrise, “Everlastingly meaningful, Godly event”. Finally in African Meeting in America, the spiritual reference to the “four soul brothers” mentioned. There is a recurring theme of spiritual connection and the divine, with the sun often serving as a metaphor for God’s presence and love. Most of the images reflected on the

upliftment of spiritual feelings, such as no 6, 7, 15 and 16.

Sub-theme 1: Wonder is echoed in Sunrise Fried Fish, “It’s always good to have a welcoming friend”, Morning Artist, “Gently stroking in the soft sunshine” and To Father Sky and Mother Earth, “And maritime denizens feed on you”. The narrative about Jesus frying fish on the shores of Galilee emphasizes the theme of nurturing and care for others, likening it to the warmth and sustenance provided by the sun. Image 6 conveys a sense of divine wonder.

Sub-theme 2: Most of the personal reflections focus on the awe-inspiring beauty of sunrise and sunset. In DAY 236: National Shutdown Morning Shadows & Light, reference is made to “ode to the Creator as an artist dyeing the morning colours of the ocean and sky.”, “majestically splendid, a beautiful sky flower”, and “bringing out your water color palette”. Hide and Seek, “I walk watching her, She suddenly stands majestically splendid”, DAY 236: National Shutdown Morning Shadows & Light, “How do I see differently see through the eyes of Light?”, Haiku 1, “Kalahari whispers red – Lion mane blends in” and Image 16 on the Cape Town promenade reinforce this awe.

Sub-theme 3: Divine presence in Sunflower, “The Gardener buries you”, Sunrise Fried Fish, “in the morning sunshine of the Son”, Sunrise, “Everlasting meaningful, Godly event”, and African meeting in America “On four soul brothers”. The theme of transformation and the presence of divine is depicted through the sun peeking through clouds, and playing a game of hide and seek likening it to “everlastingly meaningful, Godly event”. The symbolism of the poems lie in human spiritual and emotional experiences. To Father Sky and Mother Earth “life is like an avenue of misty dewy dawn, a rippling river of effervescent emotion” and in The Symbolic Sun, “Religion and traditional devotion”. Throughout the text, the sense

of connection between the sun's journey and the human search for meaning and light in the world remains. The images of the sun, either rising or setting reminded constantly of divine presence and deep seated spirituality, especially in Image 6, 7, 15 and 16.

Theme 4: Nature

The document is rich in imagery, using vivid descriptions to evoke the senses. Imagery includes the sunflower's journey, the warmth of the morning sun, the colors of sunrise and sunset, and the playful interaction between the sun and the speaker in the "Hide and Seek" poem. The haikus are particularly dense with imagery, capturing moments of light and nature in concise, evocative language. The Haikus capture the essence of the sun's influence on different landscapes, including the Kalahari Desert "whispers red" and the African savannah "barren land awakes", as well as in African Meeting in America with "Natured and nurtured In Africa", each depicting a unique interaction of light and nature.

Sub-theme 1: Beauty in Haiku 3, Moon light, moon bright", Beautiful Sunset Considerations, "Perfectly peaceful solitude", The Symbolic Sun, "Stirs the larks, makes monkeys chatter, rust drenched rocks and silver seas" and "All the living flowers, trees, birds and bees". Every photograph enraptures nature in its beauty or pensive mood and evokes emotions of peace and tranquility.

Sub-theme 2: Connection "Now, see who you are becoming", Sunrise Fried Fish, "They recognize you in their warmed hearts" and Morning Artist, "And, I discover you love the morning too" and African Meeting in America, "Of kindred spirits natured and nurtured in Africa". The document encourages the reader to reflect on deeper meanings and connections. It invites contemplation on the cycles of nature, the role of light in both the physical

and spiritual realms, and the interplay between the natural world and human emotions. The text challenges the reader to see beyond the surface, to find beauty and significance in the everyday, and to consider the transformative power of light and love. Morning Artist celebrates the sun's role in natural cycle, "I always thought you were an evening person, showing off your beautiful sunset silhouettes and, I discover you love the morning too" and "the sun will go up and down". Reflections on a deep sense of connection with nature and the inner self is evident in the photographs, the connection between spirit and nature, with the images further deepening this reflection, especially in Image 1, 6, 7, 12, 15 and 16.

As a last sub-theme, Positivity is stated in Haiku Six, "Brings hope for the day ahead", in African Meeting in America, "kindred spirits natured and nurtured In Africa", and Haiku Three, "Fields ablaze with life". The document explores the interconnectedness of nature and human emotions, with the sunrise and sunset serving as catalysts for reflection and awe. When visually evaluating Figure 2 below, it is evident that the themes in the poems and photographs are mainly positive. The negative sentiments are better explained by pensive and contrasting beauty, especially in the structure of the haiku's. Haiku's aim to capture a fleeting moment that evokes deep emotions in 17 syllables that arouses a profound connection to the sun (Tamara Mai Salsabila P and Yuni Masrokhah 2023).

Finally, the global theme weaves together imagery of the sun and depicts is as a source of life "Still, your heart is attracted to a silent light that calls you to come out", energy "she suddenly stand majestically splendid", and inspiration, "we see ourselves differently with all the strength, grace and potential that is hidden in us".

V. GLOBAL SENTIMENT ANALYSIS

A sentiment classification based on the themes as depicted in Figure 1, reveal a positive sentiment, suggesting the text has a slightly more favorable tone than neutral. Language is largely neutral with occasional positive expression where the authors express their opinions. The score mainly indicates a general satisfaction without strong enthusiasm. Kessler and Nicolov (2009) claim that user-generated content is rich as it is unsolicited in nature, and sentiment analysis can be used for understanding subjective emotions in texts and is often valued for personal growth or understanding

A. Sentiment analysis

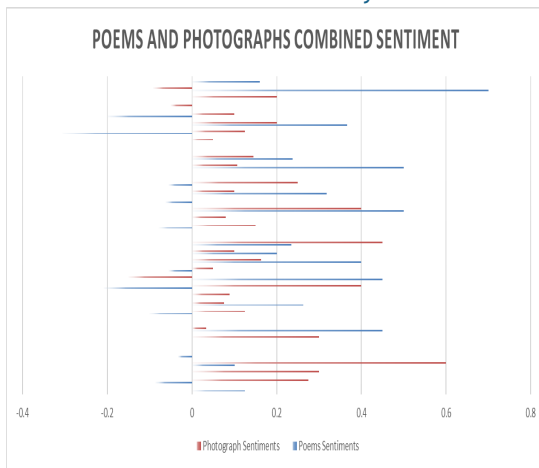


Figure 2: Bar graph of combined sentiments expressed in poems and photographs (Microsoft 2021)

A sentiment classification score of 0.17 indicates a positive sentiment, suggesting the text has a slightly more favorable tone than neutral. Language is largely natural with occasional positive expression where the authors express their opinions. The score mainly indicates a general satisfaction for user-centered design without strong enthusiasm.

The poets express a belief in the

transformative power of light, particularly the sun, to bring about change and renewal. This is evident in poems like “Sunflower” and “DAY 236: National Shutdown,” where the sun is seen as a source of hope and transformation. Several images symbolize new beginnings and hope, including the sunrise scenes (Images 2, 8, 10) and the sunset over the Kalahari Desert (Image 4). These images suggest that each day brings new opportunities and the potential for renewal and positive change.

B. Word Cloud



Figure 3: Word cloud summary of top twenty-five words (Atlas.Ti Scientific Software Development GmbH” 2024)

Word clouds or word tags, represent text data graphically in a visual summary in varying sized words, indicating key themes and patterns at a glance. This study presents sunrise and sunset from poetic and photographic perspectives, each highlighting different emotions, reflections, and interactions with the natural world and human experience. Here are the different perspectives on sunrise and sunset as presented in the word cloud, Figure 4 above. The sunflower poem describes the sun’s light as transformative, bringing life and growth from a state of darkness and neglect. The narrative about Jesus frying fish on the shores of Galilee portrays the

morning sun's warmth as nurturing and comforting, akin to the care and sustenance provided by Jesus to His disciples.

C. Limitations of the study

The study investigated the interpretation of poems and photographs submitted by a small number of participants. Narratives of the photographs were generated with AI through a simple prompt. The limitations, errors and biases of AI is well documented and the results must be read with this caution in mind. The study included narratives by the three authors and could include bias. Future research could explore the interaction between poetry, images and AI with a larger sample.

CONCLUSION

This article is a multifaceted exploration of the sun's enduring influence on the natural world and human experience blending ancient reverence with modern innovations such as AI tools. It incorporates a comparative lens on sun worship and the symbolic relevance in different cultures, fusing modernism and traditionalism. Sun worshipping is central to many ancient civilizations like the Egyptians and Meso-Americans, reflects humanity's timeless connection to natural cycles and divine forces. The study used poetry and photographs to convey a message of hope, renewal, and the profound impact of light, both literal and metaphorical. Through its rich imagery and thematic depth, it encourages the reader to engage with the world around them in a more meaningful and reflective way. The study successfully bridges the dichotomy between novelty and heritage. By utilizing AI, it reinterprets age-old themes of light, hope, and renewal, reflecting the modernist ethos of innovation, while respecting traditional motifs. This balance between old and new, modernism and traditionalism, allows for

a richer understanding of how technology can reinterpret ancient narratives, guiding future research towards a deeper, AI-assisted engagement with nature, spirituality, and cultural history. Future research is aimed at contributing a deeper and comprehensive understanding of the effect of engaging in nature through poetry and photographs using AI.

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BIOGRAPHY



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STEVE EDWARDS [he, him] PhD DEd is currently an Emeritus Professor and Research Fellow at the University of Zululand. Qualifications include doctoral degrees in Psychology and

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JABULANI DENNIS THWALA [he, him] PhD in Community Psychology is a retired professor in the field of clinical psychology from the \University of Zululand, Psychology Department. He

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APPENDIX

We felt we should include the following poem on Mother Nature as our Appendix to celebrate Greater Being and Source of our One Interconnectedness and Interconnected Oneness.

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Mother Earth
You are available day and night
You accommodate us all
You feed us all
You care for us all
You hide some of us
You do not discriminate
You expose some of us
We spit at you
You do not fight back
Who are you?
How did you come about?
You are so reliable!
You deserve praise.
Who are you?
You knew me long before birth
Who are you?
You feed me day and night
Who are you?
You feed all the living beings and things
Who are you?
You care for me regardless of my sins
Who are you?
You are strict yet human

Who are you?
You sometimes punish when I think I'm right
Who are you?
You forgive when I don't deserve forgiveness
Who are you?
You accommodate both good and bad
Who are you...?
You deserve respect
You deserve recognition
You earn respect from others
You provide space for all
Who are you?
You are what we need!
Water bellows and hum at you
Fire warm and destroy at your lap
Bulls bellow and fight over you
Winters wipe your beautiful face
Hounds and mongrels admire your glow
Sky birds roam day and night over your beautiful face
Who are you!
You are what we need