Neutrosophic Sets and Systems, Vol. 82, 2025
University of New Mexico

Bridging Ancient Wisdom and Modern Logic: Neutrosophic Perspectives on Body, Mind, Soul and Spirit

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Abstract: This study explores the application of neutrosophic logic to the interrelation of body, mind, soul, and spirit, proposing a fluid model that moves beyond traditional dualistic frameworks. Unlike rigid categorizations, the Body-Mind-Soul-Spirit Fluidity model introduces a non-binary approach where these elements interact dynamically, existing in varying degrees of truth, falsehood, and indeterminacy. By integrating n-valued refined neutrosophic logic, this framework enhances the representation of uncertainty, contradiction, and partial beliefs, particularly in stance detection. A computational model is developed to classify stances in academic literature, leveraging a zero-shot classifier based on BART-large-MNLI. The model assigns neutrosophic values across multiple dimensions, enabling a nuanced understanding of support, opposition, and neutrality with refined degrees such as partial support and partial opposition. Furthermore, the study establishes philosophical connections between neutrosophy and indigenous worldviews, such as those of the Yoruba, Mayan, and Amazonian traditions, emphasizing the rejection of rigid dichotomies. These insights suggest that neutrosophic logic can be extended to ethics, AI, and cognitive science, providing a robust framework for reasoning under uncertainty and dynamic identity structures.

Keywords: Neutrosophic logic, Body-mind-soul-spirit fluidity, Stance detection, Indeterminacy modeling, Artificial intelligence ethics

1. Introduction

The article "Neutrosophic Perspectives on the Body-Mind-Soul-Spirit Fluidity" by Florentin Smarandache (2025) explores how neutrosophy can be applied to the relationship between body, mind, soul, and spirit [1]. Unlike traditional models that present these components as separate or hierarchical entities, this approach proposes a quadruple fluidity where each element is interconnected and can exist in varying degrees of truth, indeterminacy, and falsehood.

Florentin Smarandache introduces a neutrosophic framework that transcends Cartesian dualism and other traditional dichotomous models in the philosophy of mind and the study of human beings. This is achieved through the concept of quadruple fluidity, which replaces the rigid separation between body and mind with a dynamic and ever-changing interaction among body, mind, soul, and spirit [1]. By incorporating neutrosophic logic, we move beyond binary oppositions (e.g., mind vs. body, true vs. false) to a framework where truth, falsehood, and indeterminacy coexist[3]. This could offer new insights into the philosophy of mind [4], cognitive science [5], and even artificial intelligence [6], where rigid categorizations often fail to capture the complexity of human experience.

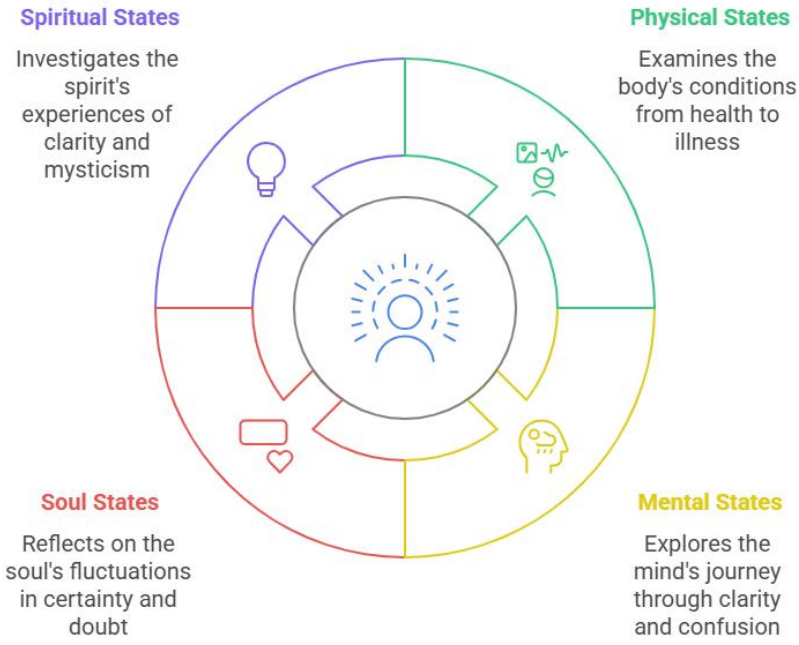

Figure 1. Neutrosophic Perspectives on the Human Body-Mind-Soul-Spirit Fluidity

The Body-Mind-Soul-Spirit Fluidity model surpasses this dichotomy by not reducing human existence to two static elements (mind and body) but instead proposes a fluid interconnectivity among four dimensions that exist in dynamic and non-binary states. In the neutrosophic model, the four components of the human being are not separate but rather [7]:

- Spirituality is an inherent dimension of the human being, not only linked to religions but also to the search for purpose, transcendence, and connection with something greater.
- The body is not just physical; it also exists in neutral states of transition (e.g., sick, healthy).
- The mind is not purely rational; it can be in states of confusion or indeterminacy (e.g., emotional processing, altered states of consciousness).
- The soul is not a fixed essence; it can fluctuate between states of certainty and uncertainty about identity, morality, or life purpose.
- The spirit is not entirely transcendental; it can oscillate between clarity and confusion, between deep mystical experiences and states of doubt.

These components do not operate separately but affect each other, allowing for a dynamic model where the boundaries between body, mind, soul, and spirit are permeable and not absolute.

Furthermore, the Body-Mind-Soul-Spirit Fluidity model aligns with various indigenous and philosophical worldviews, particularly those found in Latin American cosmologies[, where identity and reality are perceived as interconnected and constantly evolving. Traditions such as Yoruba philosophy, Mayan Nahualism, and Amazonian shamanic practices similarly reject rigid dichotomies, instead embracing a continuum of existence where spiritual, physical, and cognitive states dynamically interact [8-10]. This perspective reinforces the neutrosophic notion that truth, indeterminacy, and falsehood coexist in non-binary, context-dependent relationships rather than fixed categories.

Beyond its philosophical implications, this framework presents practical applications in areas such as stance detection in artificial intelligence (AI) [11, 12], cognitive modeling[13], and algorithmic ethics [14, 15]. By leveraging n-valued refined neutrosophic logic [16], computational models can

more accurately capture ambiguity, contradiction, and partial truths, which are crucial for domains requiring nuanced decision-making. This study proposes an advanced stance classification model based on zero-shot learning and semantic analysis, demonstrating how AI systems can integrate uncertainty and dynamic identity structures to enhance automated reasoning and ethical AI frameworks.

2 Preliminaries

2.1 Relation to Latin American and Modern Cosmovisions

The Yoruba philosophy, which has significantly influenced spiritual and cultural traditions in Cuba, the Caribbean, and Brazil, holds that the human being is composed of ara (physical body), emi (soul or vital energy), and ori (consciousness and destiny), where Ori acts as an intermediary between free will and determinism, allowing variations in a person's destiny over time[17]. Similarly, neutrosophy, developed by Florentin Smarandache, introduces a model where truth, identity, and reality are not absolute but exist on a spectrum of truth (T), falsehood (F), and indeterminacy (I) [18]. This conceptual alignment allows for understanding both Ori and personal development from a dynamic perspective, where identity is not fixed but flows and evolves based on experience and perception.

Figure 2. Yoruba Head Sculpture [19]

Both models reject the rigid dichotomy between determinism and free will, offering a more flexible and contextual approach. In Yoruba philosophy, a person chooses their destiny before birth but can modify it through knowledge and decisions [20]. In the neutrosophy model, existence is conceived in terms of degrees of certainty and uncertainty, allowing for a more nuanced interpretation of human development, morality, and decision-making. Thus, an individual is not entirely bound to their destiny, nor do they have absolute freedom, but rather navigate between states of possibility and change[1,7].

In the Mayan worldview, existence is governed by the concept of Nahualism, where each human has a nahual (complementary energy or spirit) [21]. This fluid relationship between the physical

and spiritual worlds suggests that a person's identity is not static but changes over time and circumstances, depending on their nahual and connection with nature. The Mayans also conceived reality in terms of cycles and transformation, which aligns with the neutrosophic idea that truth and identity fluctuate in degrees of certainty and uncertainty. An individual is not entirely "good" or "bad," nor is their destiny completely determined, but can change according to their interaction with their nahual and cosmic energy.

Amazonian peoples, such as the Shipibo-Konibo or Yanomami, conceive reality as an interaction between multiple dimensions[22]. Shamans access intermediate states of consciousness, resembling neutrosophic indeterminacy: the perception of reality changes according to the connection with spirits and sacred plants. In these traditions, the body is not just physical, the mind is not just rational, and the spirit is not just transcendental, but these elements are in constant interaction and transformation. Rituals and visionary experiences alter states of perception, fitting with the neutrosophic idea that there is no single state of truth or reality, but multiple coexisting interpretations[23].

Neutrosophy and its Body-Mind-Soul-Spirit Fluidity model find parallels in multiple Latin American worldviews. All these traditions reject the absolute separation between matter and spirit, certainty and falsehood, destiny and free will, proposing instead an interconnected system where identity and truth exist in dynamic states. Neutrosophy, developed by Florentin Smarandache, and the logic presented in Scientology (Logic 6 and Logic 7) share a central idea: absolutes are unattainable, and truth must be evaluated on a spectrum or gradient rather than in binary terms[24].

The recognition of spirituality as an integral part provides important elements. The Neutrosophic Body-Mind-Soul-Spirit model could revolutionize how we design and interpret AI, moving away from deterministic approaches and towards systems that are more flexible, intuitive, and closer to human experience. Its application would be crucial in areas such as algorithmic ethics, uncertain reasoning, digital identity, and potential artificial consciousness [25].

Mind-body dualism has profoundly shaped ethics throughout history, generating dichotomies that influence the understanding of good and evil, moral responsibility, and decision-making. Models like Kantian ethics [26] have privileged reason over emotions, while currents like hedonism and utilitarianism have prioritized physical well-being and material influences. The Aristotelian tradition and Hans Jonas's ethics[27] of responsibility have attempted to balance reason and corporeality but still operate within dichotomous frameworks.

Neutrosophy, on the other hand, proposes an ethics of continuity and fluidity, where moral decisions are not reduced to absolute categories of right or wrong but can include states of uncertainty. Reason and emotion are not opposites but interdependent dimensions of morality. Likewise, ethical values are not fixed but dynamic and contextual, evolving based on culture and knowledge. This approach allows for a more nuanced understanding of bioethical, technological, and social dilemmas, overcoming the limitations of traditional views. Mind-body dualism, by splitting the rational from the physical, forged ethical dichotomies that divided morality between reason and emotion, universality and contingency. Kant elevated the mind to an infallible judge; hedonism reduced ethics to the calculation of pleasure; Aristotle sought balance, but still within static frameworks. Neutrosophy, however, dissolves these boundaries: it accepts uncertainty (I) as part of the moral, reconciles compassion with duty, and understands ethics not as an immutable code but as a dialectical flow between mind, body, soul, spirit, and context. Thus, virtue is no longer a choice between poles but a dynamic integration where the ambiguous, the cultural, and the evolutionary redefine what it means to act well [1, 14, 15].

2.1 Extending Stance Detection with Refined Neutrosophic Logic

The n-valued neutrosophic set, with its capacity to represent truth, falsity, and indeterminacy across multiple refined dimensions, offers a robust framework for addressing the complexities of stance detection, where opinions often exist in nuanced, uncertain, or contradictory states[28].

Stance detection is the task of identifying expressed beliefs, opinions, or attitudes within a text. It involves determining an author's viewpoint or attitude toward a specific topic, claim, or target. This process requires analyzing textual data to infer whether the author supports, opposes, or remains neutral regarding the given proposition [29, 30].

A text sample T is said to entail a stance S of an author A when, given a specific context C, an evaluator—whether a human or an algorithm—can infer that T expresses support, opposition, or neutrality toward S.

The stance categories can be expanded beyond the primary labels (support, opposition, neutrality) to include finer distinctions such as partial support and partial opposition, depending on the granularity required for the study [3, 31].

From a computational perspective, stance detection requires[32]:

1. Context Awareness ($\boldsymbol{C}$) – Understanding the external information or assumptions influencing the interpretation of T.
2. Semantic Analysis of the Text ($\boldsymbol{T}$) – Extracting the underlying meaning using contextual embeddings and sentiment analysis techniques.
3. Inference of the Author's Stance ($\boldsymbol{S}$) – Classifying T into an appropriate stance category using machine learning models, pre-trained language models, or rule-based approaches.

This framework provides a foundation for integrating stance detection into both human-driven qualitative analyses and automated natural language processing (NLP) systems.

Incorporating n-valued refined neutrosophic logic into stance detection allows for a more nuanced representation of uncertainty, indeterminacy, and partial beliefs. By assigning degrees of truth (T), falsity (F), and indeterminacy (I) to the stance expressed in a text, this approach can model complex and ambiguous stances that go beyond binary classifications. For example, a stance may simultaneously exhibit partial support (T), partial opposition (F), and neutrality (I) due to the inherent vagueness or contradictions in the text. This aligns with the principles of neutrosophic logic, which generalizes classical and fuzzy logic to handle such complexities[33].

"The neutrosophic components (T, I, F) can be refined into n neutrosophic subcomponents (T_1, T_2, ..., T_p; I_1, I_2, ..., I_r; F_1, F_2, ..., F_s), where p, r, s, n are positive integers and p + r + s = n. This refined structure enables a nuanced representation of truth, indeterminacy, and falsity, making it particularly suitable for stance detection, where expressed beliefs often exhibit overlapping, uncertain, or contradictory dimensions[3].

2. Materials and Methods.

The research methodology employs a refined neutrosophic set structure where the classical neutrosophic components Truth (T), Indeterminacy (I), and Falsity (F) are refined into five subcomponents to model stance detection more precisely. The refined neutrosophic set A is defined as:

$$\boldsymbol{A} = \{\boldsymbol{x}, \boldsymbol{TA}(\boldsymbol{x}), \boldsymbol{IPS}(\boldsymbol{x}), \boldsymbol{IN}(\boldsymbol{x}), \boldsymbol{IPO}(\boldsymbol{x}), \boldsymbol{FA}(\boldsymbol{x}) \mid \boldsymbol{x} \in \boldsymbol{X}\} \quad (1)$$

Where each subcomponent represents:

$\boldsymbol{TA}(\boldsymbol{x})$: Complete support

$\boldsymbol{IPS}(\boldsymbol{x})$: Partial support

$\boldsymbol{IN}(\boldsymbol{x})$: Neutrality

$\boldsymbol{IPO}(\boldsymbol{x})$: Partial opposition

$\boldsymbol{FA}(\boldsymbol{x})$: Complete opposition

For each element x, the subcomponents are normalized according to:

$$\boldsymbol{TA}(\boldsymbol{x}) + \boldsymbol{IPS}(\boldsymbol{x}) + \boldsymbol{IN}(\boldsymbol{x}) + \boldsymbol{IPO}(\boldsymbol{x}) + \boldsymbol{FA}(\boldsymbol{x}) = \boldsymbol{1} \quad (2)$$

Implementation Process

The methodology consists of the following steps:

Data Collection: Research papers are retrieved from Semantic Scholar's API [38] using specific search queries related to the research topic. The API call is configured to return title, abstract, and related metadata for up to 15 papers.

Stance Classification: A zero-shot learning classifier[39] based on the BART-large-MNLI model [40] is employed to classify the stance of each paper into five categories matching the neutrosophic subcomponents:

- Support (T)
- Partial Support (IPS)
- Neutral (IN)
- Partial Opposition (IPO)
- Opposition (F)

Neutrosophic Value Assignment: The classifier's confidence scores for each category are normalized to ensure they sum to 1, aligning with the neutrosophic normalization requirement. These normalized scores become the neutrosophic values for each subcomponent.

Analysis and Aggregation: The frequency distribution of stance classifications is calculated and presented as both raw counts and percentages, providing insights into the overall stance distribution across the analyzed papers.

This refined neutrosophic approach allows for a more nuanced analysis of stance in academic literature, capturing degrees of support and opposition rather than forcing binary classifications.

3. Results

This case study examines the interrelationship between the fundamental components of human existence—Body, Mind, Soul, and Spirit—through a neutrosophic perspective. This analysis aims to understand how these elements interact and fluctuate within different worldviews, including the pre-Columbian worldview, the Yoruba worldview, and other philosophical and cultural perspectives. Hypotheses will be formulated to assess these interrelations and their impact on the perception of human existence.

Tabla 1. Neutrosophic Body-Mind-Soul-Spirit Model components

Name	Dimension Body-Mind-Soul	T, I, or F	Description
Physical health	Body	T	Refers to the overall condition and functioning of the body, including fitness and absence of illness.
Mental clarity	Mind	T	The state of having a clear, focused, and sharp mind, enabling effective thinking and decision-making.
Intolerance of uncertainty	Mind	I	Difficulty in accepting or dealing with uncertain situations, often leading to anxiety or stress.
Emotional well-being	Soul	T	A state of positive mental health where one feels balanced, content, and able to manage emotions effectively.
Spirituality	Spirit	T	The sense of connection to something greater than oneself, often involving beliefs,

			values, and practices.

Different hypotheses are analyzed to examine the Pre-Columbian worldview, the Yoruba worldview, and other perspectives using the proposed stance detection model. The following section presents these interrelations and analyzes them through the proposed stance detection framework.

Body and Mind

Table 2. Body and Mind Relationships

Hipotesis	**T**	**IPS**	**IN**	**IPO**	**F**
Does physical health influence mental clarity?	**0.1**	**0.6**	**0**	**0.3**	**0**

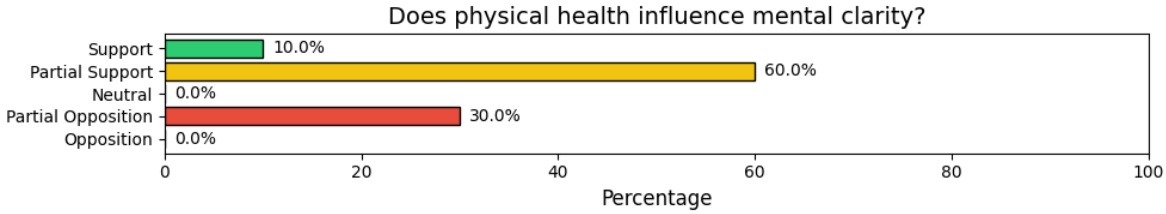

Figure 3. Does physical health influence mental clarity?

From the analysis of papers studying the hypothesis "Does physical health influence mental clarity?", it was found that 60% of studies partially support this relationship, 30% partially oppose it, while only 10% fully support it, suggesting a general trend supporting the connection between physical health and mental clarity, although with some level of controversy in the scientific literature.

Pre-Colombian Worldview

In pre-Colombian cultures, such as those of the Maya and Aztecs, there was a holistic understanding of health that integrated the body, mind, and spirit. Physical health was seen as essential for maintaining mental clarity and spiritual balance. These cultures practiced rituals and used medicinal herbs to ensure the well-being of the body, which in turn was believed to support mental and spiritual health. The interconnectedness of physical and mental states was a fundamental aspect of their worldview, emphasizing that a healthy body contributed to a clear and focused mind.

Yoruba Worldview

The Yoruba worldview also emphasizes the interconnection between physical health and mental clarity. In Yoruba culture, health is viewed as a balance between internal and external forces, and maintaining this balance is crucial for overall well-being. The Yoruba believe that physical health is influenced by spiritual forces and that a healthy body is necessary for mental clarity and spiritual harmony. Practices such as rituals, music, and dance are used to maintain this balance, highlighting the importance of physical well-being in achieving mental clarity. The concept of "Aché," or life force, is central to this belief, indicating that physical health is vital for sustaining mental and spiritual clarity.

Modern Perspective

Modern evidence supports the idea that physical health significantly influences mental clarity. Regular exercise and healthy lifestyle choices enhance cognitive function, improve mood, and reduce symptoms of mental health disorders. This underscores the importance of integrating physical activity into daily routines to support both physical and mental well-being. The consensus is that maintaining good physical health positively impacts mental clarity, aligning with both pre-Colombian and Yoruba perspectives on the interconnectedness of body and mind.

Mind-Soul

Table 2. Mind and Soul Relationships

Hipotesis	**T**	**IPS**	**IN**	**IPO**	**F**
Does intolerance of uncertainty influence emotional well-being?	**0**	**0.846**	**0**	**0.154**	**0**

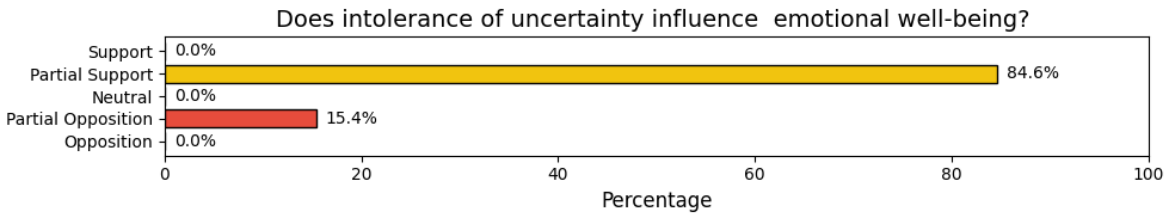

Figure 4. Does intolerance of uncertainty influence emotional well-being?

The results show that 84.6% of studies partially support this relationship, while 15.4% partially oppose it, with no studies either fully supporting, remaining neutral, or fully opposing. This strong majority of partial support suggests a significant consensus in the scientific literature about the influence of uncertainty intolerance on emotional well-being, though some debate remains.

Pre-Columbian Cosmology

In pre-Columbian cosmology, particularly among the indigenous peoples of El Salvador, such as the Pipiles and Lencas (Figure 5), the concept of balance and harmony with nature and the divine was central. Intolerance of uncertainty might have been seen as a disruption to this balance, as these cultures often relied on rituals and divination to understand and predict future events. For example, the Pipiles practiced rituals to honor deities like Tlaloc, the god of rain and agriculture, to ensure favorable conditions and reduce uncertainty in their agricultural practices. This suggests that a high intolerance of uncertainty could negatively impact emotional well-being by creating anxiety and disharmony.

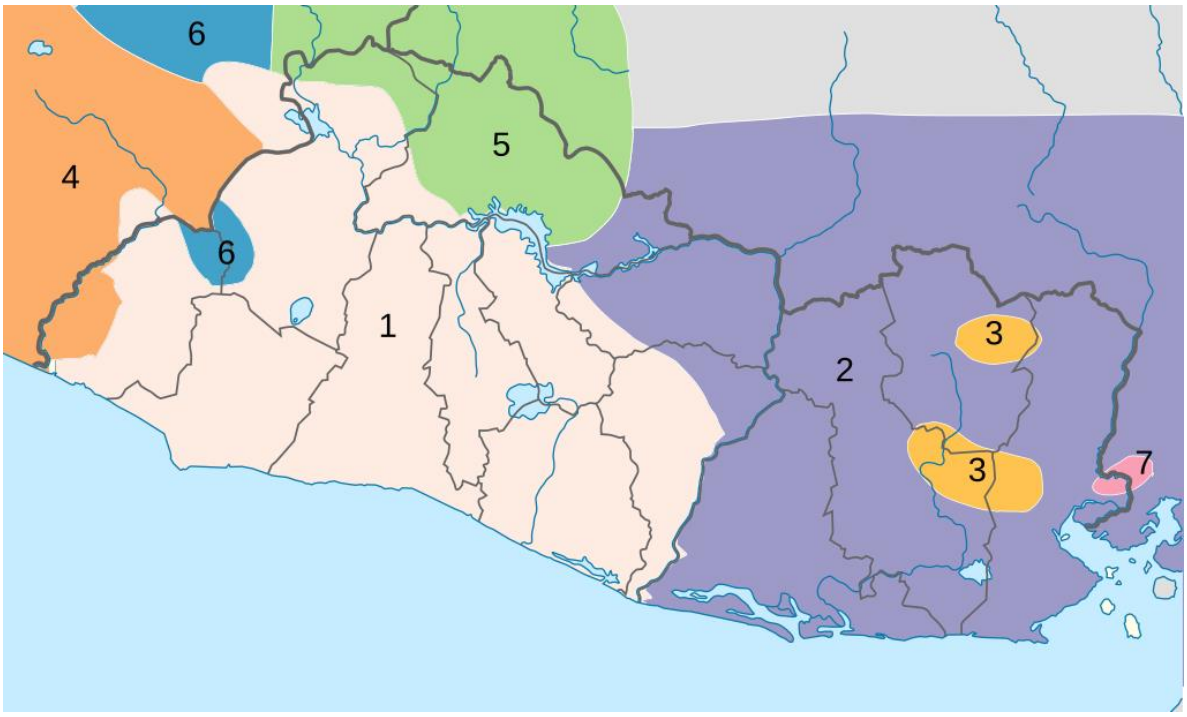

Figure 5. Map of El Salvador's Indigenous Peoples at the time of the Spanish conquest: 1. Pipil (Nahua), 2. Lenca, 3. Kakawira o Cacaopera, 4. Xinca, 5. Maya Ch'orti' people, 6. Maya Poqomam people, 7. Mangue o Chorotega [41].

Yoruba Worldview

The Yoruba worldview also emphasizes balance and harmony between known and unknown forces. Intolerance of uncertainty could be seen as a challenge to emotional well-being, as it disrupts the balance necessary for spiritual and emotional health. The Yoruba use divination, particularly through the Ifá oracle, to gain insights and guidance, which helps reduce uncertainty and promote emotional stability. This suggests that managing uncertainty through spiritual practices is crucial for maintaining emotional well-being in the Yoruba tradition.

Modern Perspective

From a modern perspective, intolerance of uncertainty is generally associated with negative impacts on emotional well-being. It can lead to increased anxiety, stress, and difficulty coping with life's unpredictability. People who struggle with uncertainty may experience heightened emotional distress, which can affect their overall mental health. Therefore, both pre-Columbian and Yoruba perspectives align with the modern understanding that managing uncertainty is important for emotional well-being.

Spirit and Soul Relationships

Table 3. Spirit and Soul Relationships

Hipotesis	**T**	**IPS**	**IN**	**IPO**	**F**
Does spirituality enhance emotional well-being?	**0.77**	**0.769**	**0**	**0.154**	**0**

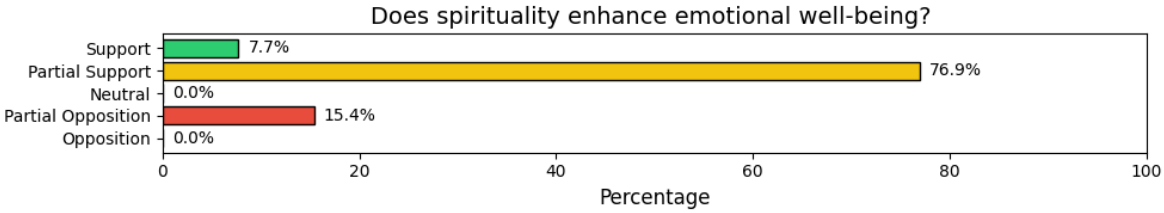

Figure 6. Does spirituality enhance emotional well-being?

The data shows that 76.9% of studies partially support this relationship, 15.4% partially oppose it, and 7.7% fully support it. There were no studies that remained neutral or fully opposed (0%). This distribution suggests a strong consensus in the scientific literature favoring a positive relationship between spirituality and emotional well-being, with the majority taking a moderately supportive stance while acknowledging potential complexities in the relationship.

Pre-Columbian Cosmology

In pre-Columbian cosmology, spirituality was deeply intertwined with daily life and was considered essential for maintaining emotional well-being. The indigenous peoples of regions like Mesoamerica, including the Pipiles and Lencas of El Salvador, practiced rituals and ceremonies to connect with the divine and the natural world. These spiritual practices were believed to bring balance and harmony, which were crucial for emotional health. The emphasis on community rituals and the veneration of deities and ancestors helped individuals feel connected to a larger cosmic order, providing a sense of purpose and emotional stability.

Yoruba Worldview

The Yoruba worldview similarly emphasizes the importance of spirituality for emotional well-being. Yoruba spirituality is centered around the belief in a complex interplay between the physical and spiritual realms, with deities known as Orishas playing a significant role in guiding and protecting individuals. Engaging in spiritual practices, such as rituals, divination, and offerings to the Orishas, is believed to enhance emotional well-being by fostering a sense of connection to the divine and the community. The concept of aché, or the life force, is central to Yoruba spirituality, signifying the energy that flows through all things and supports emotional and spiritual health.

Modern Perspective

From a modern perspective, spirituality is often associated with improved emotional well-being. Engaging in spiritual practices can provide individuals with a sense of purpose, community, and connection to something greater than themselves. This can lead to increased resilience, reduced stress, and a greater sense of peace and contentment. Both pre-Columbian and Yoruba perspectives align with this understanding, highlighting the role of spirituality in fostering emotional health and balance.

5. Conclusions

This study explored the application of neutrosophic logic to the interconnected dynamics of body, mind, soul, and spirit, emphasizing the fluidity of these dimensions rather than treating them as rigid, separate entities. The proposed Body-Mind-Soul-Spirit Fluidity model extends traditional dualistic frameworks, allowing for a non-binary, dynamic understanding of human existence where truth, falsehood, and indeterminacy coexist in varying degrees. By integrating n-valued refined neutrosophic logic, the model enhances the representation of uncertainty, contradiction, and partial truths in different domains, particularly in stance detection. The study demonstrated how refined neutrosophic components (T, I, F) can be effectively used to classify and quantify complex stances, addressing real-world ambiguity where opinions or beliefs often overlap rather than conforming to absolute categories.

The parallels drawn between neutrosophy and Latin American cosmologies, including Yoruba, Mayan, and Amazonian worldviews, further support the relevance of this model in understanding

identity, free will, and moral reasoning. These indigenous perspectives align with neutrosophy in rejecting rigid dichotomies, instead emphasizing interconnectedness, transformation, and fluidity in human experience. From an applied perspective, the refined neutrosophic stance detection model, implemented through zero-shot classification with Semantic Scholar data, revealed promising results. The multi-valued classification system enabled a more granular and accurate representation of support, opposition, neutrality, and partial beliefs, surpassing the limitations of traditional binary or ternary classification schemes. The results indicated that the proposed approach could improve stance detection in academic literature, offering a more nuanced assessment of scientific consensus. Moreover, this study suggests that adopting neutrosophic logic in AI, ethics, and cognitive science could foster systems that better handle uncertainty, adaptive reasoning, and evolving identity structures. By moving beyond deterministic and binary paradigms, future research can leverage this framework in areas such as algorithmic ethics, digital identity, human cognition modeling, and artificial consciousness.

. This study lays the groundwork for further exploration into how non-binary reasoning can reshape scientific inquiry, ethical frameworks, and intelligent systems.Additional future research should explore how neutrosophic logic intersects with indigenous pedagogical approaches to develop more inclusive educational frameworks that honor diverse ways of knowing. Additionally, studies should investigate how combining neutrosophic principles with experiential learning methodologies could create more effective and culturally responsive teaching practices that bridge traditional and contemporary educational paradigms.

References

[1] Smarandache, F. (2025). Neutrosophic Perspectives on the Body-Mind-Soul-Spirit Fluidity. Neutrosophic Sets and Systems, 78(1), 6.

[2] Smarandache, F. (1999). A Unifying Field in Logics: Neutrosophic Logic. In Philosophy (pp. 1-141). American Research Press.

[3] Smarandache, F., & Vázquez, M. Y. L. (2025). From Di-alectics to N-alectics: Indigenous Cultures and Ancestral Philosophies in Latin America. Neutrosophic Sets and Systems, 81, 1-11.

[4] Jones, M. (2024). A Simple, Testable Mind–Body Solution?. Journal of Consciousness Studies. https://doi.org/10.53765/20512201.31.1.051.

[5] Chong, D., & Xiao, W. (2018). Cognition and Body: A Perspective of Theoretical Psychology. Journal of Psychological Research. https://doi.org/10.30564/jpr.v1i1.199.

[6] Fischer, P. (2024). 'Is it perfume from a dress / that makes me so digress?' – the categorical differences between human experience and AI highlighted by literature. Interdisciplinary Science Reviews. https://doi.org/10.1177/03080188241256197.

[7] Fujita, T., & Smarandache, F. (2025). Reconsideration of Neutrosophic Social Science and Neutrosophic Phenomenology with Non-classical logic. Systems Assessment and Engineering Management, 3, 9-95.

[8] Ciófalo, N. (2023). Mexican Indigenous Psychologies, Cosmovisons, and Altered States of Consciousness. Journal of Consciousness Studies. https://doi.org/10.53765/20512201.30.5.103.

[9] Trnka, R., & Lorencová, R. (2022). Indigenous Concepts of Consciousness, Soul, and Spirit: A Cross-Cultural Perspective. Journal of Consciousness Studies. https://doi.org/10.53765/20512201.29.1.113.

[10] Daniels, K. (2021). Vodou harmonizes the head-pot, or, Haiti's multi-soul complex. Religion, 52, 359 - 383. https://doi.org/10.1080/0048721X.2021.1963877.

[11] Zhang, B., Yang, M., Li, X., Ye, Y., Xu, X., & Dai, K. (2020). Enhancing Cross-target Stance Detection with Transferable Semantic-Emotion Knowledge. , 3188-3197. https://doi.org/10.18653/v1/2020.acl-main.291.

[12] Smarandache, F., & Leyva-Vazquez, M. (2018). Fundamentos de la lógica y los conjuntos neutrosóficos y su papel en la inteligencia artificial. Neutrosophic Computing and Machine Learning, 1, 3-8. https://doi.org/10.5281/zenodo.1254934

[13] Wu, L., Chen, X., Liu, F., Xie, J., Xia, C., Tan, Z., ... & Wang, M. (2025). EduStudio: towards a unified library for student cognitive modeling. Frontiers of Computer Science, 19(8), 198342.

[14] Leyva Vázquez, M. Y., Estupiñan Ricardo, J., & Batista Hernández, N. (2024). La Neutrosofía como herramienta para abordar la vaguedad lingüística en el análisis de textos de dilemas ético. Dilemas Contemporáneos: Educación, Política y Valores, 11(2).

[15] Vázquez, M. Y. L., Ricardo, J. E., Hernández, N. B., Casanova, R. S., & Smarandache, F. (2024). ANÁLISIS NEUTROSÓFICO DE LAS ACTITUDES HACIA LA MÁQUINA DE EXPERIENCIA DE NOZICK. Investigación Operacional, 45(4).

[16] Smarandache, F. (2013). n-Valued Refined Neutrosophic Logic and Its Applications to Physics. Bulletin of the American Physical Society, 58.

[17] Ekanola, A. (2006). A Naturalistic Interpretation of the Yoruba Concepts of Ori. Philosophia Africana, 9, 41-52. https://doi.org/10.5840/PHILAFRICANA20069110.

[18] Paraskevas, A., & Madas, M. (2024). A Neutrosophic Model for Measuring Evolution, Involution, and Indeterminacy in Species: Integrating Common and Uncommon Traits in Environmental Adaptation. Neutrosophic Systems With Applications, 23, 23-32. https://doi.org/10.61356/j.nswa.2024.23400

[19] Britannica. (s.f.). Yoruba head sculpture. Retrieved from https://www.britannica.com/topic/Yoruba

[20] Salami, Y. (2007). Predestinacao e a metafisica da identidade: um estudo de caso Ioruba. , 263-279. https://doi.org/10.9771/1981-1411AA.V0I35.21133.

[21] Fischer, E. (1999). Cultural Logic and Maya Identity. Current Anthropology, 40, 473 - 500. https://doi.org/10.1086/200046.

[22] Anderson, E. (2016). The Relative Native: Essays on Indigenous Conceptual Worlds. By Eduardo Viveiros de Castro. 2015. HAU Press, Chicago. 366 pp.. Ethnobiology Letters, 7, 42-44. https://doi.org/10.14237/EBL.7.1.2016.651.

[23] Savoldi, R., Roazzi, A., & De Oliveira Sales, R. (2023). Mystical and Ego-Dissolution Experiences in Ayahuasca and Jurema Holistic Rituals: An Exploratory Study. The International Journal for the Psychology of Religion, 33, 332 - 360. https://doi.org/10.1080/10508619.2023.2185369.

[24] Church of Scientology International. (2000-2015). The Axioms of Dianetics and Scientology. What is Scientology? https://www.whatisscientology.org/html/Part14/Chp41/pg0745-b.html

[25] Chella, A., & Manzotti, R. (2010). Artificial consciousness. In Perception-Action Cycle: Models, Architectures, and Hardware (pp. 637-671). New York, NY: Springer New York.

[26] Clewis, R. (2017). Does Kantian Ethics Condone Mood and Cognitive Enhancement?. Neuroethics, 10, 349-361. https://doi.org/10.1007/S12152-017-9302-2.

[27] Hauskeller, M. (2015). The Ontological Ethics of Hans Jonas. , 39-55. https://doi.org/10.1007/978-94-017-9870-9_3.

[28] Smarandache, F. (2018). Lógica neutrosófica refinada n-valuada y sus aplicaciones a la física. Neutrosophic Computing and Machine Learning, 2, 3-8. https://doi.org/10.5281/zenodo.1467233

[29] Burnham, M. (2023). Stance detection: a practical guide to classifying political beliefs in text. Political Science Research and Methods. https://doi.org/10.1017/psrm.2024.35.

[30] Huang, H., Zhang, B., Li, Y., Zhang, B., Sun, Y., Luo, C., & Peng, C. (2023). Knowledge-enhanced Prompt-tuning for Stance Detection. ACM Transactions on Asian and Low-Resource Language Information Processing, 22, 1 - 20. https://doi.org/10.1145/3588767.

[31] M. Sallam, K., & Mohamed, A. W. (2023). Single Valued Neutrosophic Sets for Assessment Quality of Suppliers under Uncertainty Environment. Multicriteria Algorithms With Applications, 1, 1-10. https://doi.org/10.61356/j.mawa.2023.15861

[32] Küçük, D., & Can, F. (2020). Stance Detection. ACM Computing Surveys (CSUR), 53, 1 - 37. https://doi.org/10.1145/3369026.

[33] Kandasamy, I., Kandasamy, W., Obbineni, J., & Smarandache, F. (2020). Sentiment analysis of tweets using refined neutrosophic sets. Comput. Ind., 115, 103180. https://doi.org/10.1016/j.compind.2019.103180.

[38] Kinney, R., Anastasiades, C., Authur, R., Beltagy, I., Bragg, J., Buraczynski, A., Cachola, I., Candra, S., Chandrasekhar, Y., Cohan, A., Crawford, M., Downey, D., Dunkelberger, J., Etzioni, O., Evans, R., Feldman, S., Gorney, J., Graham, D., Hu, F., Huff, R., King, D., Kohlmeier, S., Kuehl, B., Langan, M., Lin, D., Liu, H., Lo, K., Lochner, J., MacMillan, K., Murray, T., Newell, C., Rao, S., Rohatgi, S., Sayre, P., Shen, Z., Singh, A., Soldaini, L., Subramanian, S., Tanaka, A., Wade, A., Wagner, L., Wang, L., Wilhelm, C., Wu, C., Yang, J., Zamarron, A., Van Zuylen, M., & Weld, D. (2023). The Semantic Scholar Open Data Platform. ArXiv, abs/2301.10140. https://doi.org/10.48550/arXiv.2301.10140.

[39] Changpinyo, S., Chao, W., Gong, B., & Sha, F. (2018). Classifier and Exemplar Synthesis for Zero-Shot Learning. International Journal of Computer Vision, 128, 166 - 201. https://doi.org/10.1007/s11263-019-01193-1.

[40] Giddaluru, S., Maturi, S., Ooruchintala, O., & Munirathnam, M. (2024). Stance Detection in Hinglish Data using the BART-large-MNLI Integration Model. Engineering, Technology & Applied Science Research. https://doi.org/10.48084/etasr.7741.

[41] Juan Miguel. (2011). Indigenous Peoples before the Conquest of El Salvador [Map]. Wikimedia Commons. Retrieved from https://commons.wikimedia.org/wiki/File:Pueblos_Indigenas_antes_de_la_conquista_El_Salvador.svg

Received: Oct 1, 2024. Accepted: March 1, 2025