



Creative Exploration of Yagé in Intrapersonal Discovery through the Plithogenic IADOV Method

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Abstract. Post-Yagé visions, influenced by ancestral Indigenous practices, have had a significant impact on the worldview and collective consciousness of participants. The objective of this study is to analyze post-Yagé visions from an intercultural perspective, evaluating cultural depth, creativity, psychological impact, social relevance, and clarity in interpretation. The objective is to understand their influence on the Indigenous worldview and their impact on individual and collective consciousness through the modeling of the plithogenic IADOV. Correlations were identified between interpretive clarity, creativity, and psychological impact, highlighting their influence on the identity and social awareness of participants. In conclusion, this study provides deeper insights into the phenomenon of post-Yagé visions by offering a comprehensive understanding of their cultural and psychological impact. Additionally, studying them from an intercultural perspective is recommended to enhance their understanding and applicability in the modern era.

Keywords: Indigenous worldview, Indigenous spirituality, cultural transcendence, Indigenous ritual, plithogenic IADOV.

1 Introduction

Post-Yagé visions have garnered increasing academic interest, particularly within the context of intercultural studies, due to their profound connection with the indigenous worldview and their influence on individual and collective consciousness [1]. Yagé, a ceremonial beverage used in various Indigenous cultures of the Americas, particularly in the Amazon region, induces visionary experiences that are interpreted not only as psychological phenomena but also as spiritual manifestations [2][3]. These visions are essential for understanding how ancestral practices impact communities, particularly in terms of cultural identity, spiritual values, and the intergenerational transmission of knowledge [4].

The present project arises as an extension of a previous study that addressed essential questions about how to artistically represent the trance experience and how to attribute meaning and significance to the images derived from it [5]. Thus, creativity assumes a leading role, especially within the field of design.

Visual arts are consolidated as essential tools for cultivating sensitivity, aesthetic expression, creative thinking, and communication [6]. Through their representations, they succeed in symbolizing complex experiences. From this perspective, the project explores the potential of visionary images as a medium to convey the richness of ancestral experiences and their relevance in the present [7].

Inspired by paradigmatic works of visionary art, this study investigates the connection between shamanic rituals and the symbolic representation of trance [8]. These artistic expressions not only capture a rich and profound visual language but also reflect the interactions between spiritual cosmology and heightened sensory perception [9].

With this approach, the primary purpose of the study is to analyze post-Yagé visions from an intercultural perspective by evaluating their cultural depth, creativity, psychological impact, social relevance, and clarity of interpretation. Indeed, it seeks to understand their influence on the indigenous worldview and their impact on the individual and collective consciousness of participants. To achieve this, the plithogenic IADOV method was employed to evaluate areas of satisfaction derived from the

experiences manifested during the Yagé ceremony.

2 Preliminaries

The study employed the plithogenic IADOV method to evaluate participants' experiences during the Yagé ceremony by integrating contradictory and subjective criteria. Through participant observation, interactions with the shaman, ingestion of Yagé, emotional manifestations, and the use of tobacco as a regulator were analyzed, along with a descriptive process of the ceremony (see Table 1).

Table 1: Descriptive process of the Yagé ceremony. Source: Own elaboration.

Item	Hour	Place	Activity
1	15H00	Sour Lake	Departure from Lago Agrio, towards Dureno
2	16H00	Dureno, Agrio Lake, Sucumbios	Crossing the Aguarico River by boat
3	16H30	Dureno, Agrio Lake, Sucumbios	Entrance to the A'i Cofán-Dureno community
4	16H45	A'i Cofán Community – Dureno, Lago Agrio	Walk into the jungle, towards the maloca
5	17H30	A'i Cofán Community – Dureno, Lago Agrio	Location of hammocks, green leaves in the maloca
6	19H00	A'i Cofán Community – Dureno, Lago Agrio	Contextualization and explanation of the ritual by the Shaman
7	20H00	A'i Cofán Community – Dureno, Lago Agrio	Ingestion of Yagé and chants by the shaman
8	21H00	A'i Cofán Community – Dureno, Lago Agrio	Intake by participants
9	21H30	A'i Cofán Community – Dureno, Lago Agrio	Visions
10	06H00	A'i Cofán Community – Dureno, Lago Agrio	Exit

2. Methods

To apply the plithogenic IADOV technique, experts must rely on an evaluation system based on a linguistic term that reflects the expert's opinion (see Table 2) [10]. Extending the IADOV method to plithogenic analysis through a neutrosophic scale allows for the structuring of group satisfaction [11][12], by separating the zones of indeterminacy and contradiction for a better interpretation of the results.

To understand the extension of the method, it must be defined that a plithogenic set is an extension of classical, fuzzy, intuitionistic fuzzy, and neutrosophic sets. Therefore, a plithogenic set is represented as (P, a, V, d, c) , along with its characteristics and their intersection and union relationships (according to the consulted references [13][14]).

Table 2: Evaluation system for experts. Source: Own elaboration.

Plithogenic term	Code	Scale	Punctuation
Clearly satisfied	CS	(1,0,0)	3
More satisfied than dissatisfied	MSD	(1,0.35,0.35)	2.3
Not Defined	I	I	1.5
More dissatisfied than satisfied	MDS	(0.35,0.35,1)	1
Clearly dissatisfied	CD	(0,0,1)	0
Contradictory	C	(1,0,1)	2

In the previous table, the term I in neutrosophy is used, interpreted as a unit of undefined indeterminacy. On the other hand, to determine the neutrosophic plithogenic global satisfaction index (NPGSI) of the respondents, the aggregation operator H_N^P was applied, taking into account the evaluations of each element X within the plithogenic set P; $x \in Pd_F d_{IF} d_N$. This process yields the ISGPN from the sum of the elements analyzed within the evaluated plithogenic subset, where L_r^P is the frequency, and w_j is the assigned weight (see Equation 1).

$$H_N^P (S_1^P, S_2^P, \dots, S_n^P) = \sum_{i=1}^n [w_j, L_r^P] \quad (1)$$

4 Case Study

This study explores the cultural and spiritual phenomenon of the A'i Cofán community of Dureño, focusing on the ingestion of Yagé and the resulting visions. The relevance of interpreting these experiences within their cultural context is emphasized, considering Yagé as a link between the physical and spiritual worlds. The visions described are not mere hallucinations, but symbolic representations that reflect profound aspects of the individual and collective psyche, allowing for a deeper connection with nature, ancestry, and the cosmos. The results highlight four visionary passages (see Figures 1 to 4): The Welcome, which represents spiritual entrance;



Figure 1: Scene 1: The Welcome. Prepared by: Arleth Márquez.

- The River, symbolizes decisions accompanied by family support;

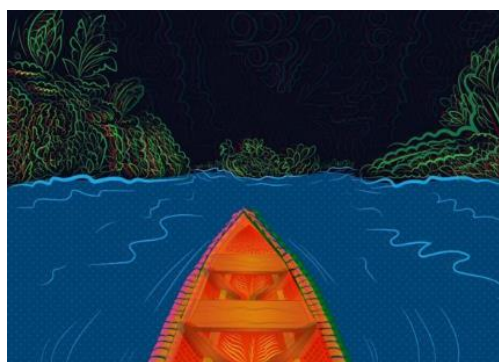


Figure 2: Scene 2: The river. Prepared by: Arleth Márquez.

- The Island, as a safe haven; and



Figure 3: Scene 3: The island. Prepared by: Arleth Márquez.

- The Tiger, an emblem of wisdom and leadership according to the A'i Cofán worldview.



Figure 4: Scene 4: The tiger. Prepared by: Arleth Márquez.

These experiences are artistically captured by combining visual symbolism and iconological analysis to reinterpret emotions, traditions, and spirituality. However, despite advances in the study ofentheogens, few have addressed the cultural significance of visionary images in Indigenous communities.

The qualitative methodology, supported by participant observation, has been essential for capturing the richness of visionary experiences, recognizing their individual and contextual variability. Therefore, the application of the plithogenic IADOV method is necessary to evaluate the satisfaction of participants during the Yagé ceremony, by analyzing four fundamental elements observed in the case study:

- Creativity in post-Yagé visionary experiences.
- Psychological impact of post-Yagé visions.
- Social relevance of post-Yagé visions.
- Clarity in the interpretation of post-Yagé visions.

4.1 Creativity in post-Yagé visionary experiences.

Post-Yagé visionary experiences reflect a complex creativity that integrates artistic expression and deep cognitive processes. Through interviews and observations, three key aspects were identified. First, the visualization of landscapes and forms includes surreal scenes, geometric figures, and cultural symbols with profound spiritual meanings. Second, symbolic narratives highlight transformations and harmonies connected to Indigenous traditions and mythologies. Third, emotional expression manifests in visual and artistic metaphors that reflect feelings of healing and renewal.

To evaluate this creativity, the Neutrosophic IADOV method was used, allowing for the analysis

of artistic expression, visual and symbolic creativity, and emotional impact (see Table 3). This approach provides a comprehensive perspective on how post-Yagé visions contribute to the spiritual and emotional understanding of participants.

Table 3: Group creativity index evaluation. Source: Own elaboration.

Plithogenic criterion	Scale	Score (P)	Frequency (F)	$P \cdot F$	$\frac{F \cdot S}{n}$
Clearly satisfied	(1,0,0)	5	16	80	3.20
More satisfied than dissatisfied	(1,0.35,0.35)	4	3	12	0.48
Not defined	I	3	2	6	0.24
More dissatisfied than satisfied	(0.35, 0.35, 1)	2	1	2	0.08
Clearly dissatisfied	(0,0,1)	1	1	1	0.04
Contradictory	(1,0,1)	0	2	0	0.00
Creativity Index (CI) = 4.04					

The creativity expressed in post-Yagé visionary experiences is a multidimensional phenomenon that encompasses not only artistic and visual production but also emotional transformation and the spiritual connection to cultural traditions. The analysis using the plithogenic IADOV method highlights how participants positively value the symbolic and visual creativity generated by Yagé experiences, as it contributes to their understanding of the spiritual and cultural world. This creativity index, with a value of 4.04, suggests a collective perception of creativity as a key element in the interpretation and transmission of spiritual experiences within the Indigenous community.

4.2 Psychological impact of post-Yagé visions.

The analysis of the psychological impact of post-Yagé visions reveals profound changes in the emotional well-being and consciousness of participants. In the short term, the release of repressed emotions, depersonalization, and confrontation with deep fears are highlighted, generating emotional relief and renewal.

In the long term, these experiences foster significant personal transformations, with greater self-understanding, reduced anxiety and depression, and a stronger connection with the community and nature. These visions reaffirm cultural values and promote a sense of belonging and inner balance.

The evaluation, conducted using the plithogenic IADOV method, allowed for the measurement of satisfaction and psychological impact (see Table 4). It thus provided a comprehensive understanding of the emotional and spiritual effects associated with post-Yagé visions.

Table 4: Calculation of the overall psychological impact index. Source: Own elaboration.

Plithogenic criterion	Scale	Score (P)	Frequency (F)	$P \cdot F$	$\frac{F \cdot S}{n}$
Clearly satisfied	(1,0,0)	5	14	70	2.80
More satisfied than dissatisfied	(1,0.35,0.35)	4	7	28	1.12
Not defined	I	3	1	3	0.12
More dissatisfied than satisfied	(0.35, 0.35, 1)	2	1	2	0.08
Clearly dissatisfied	(0,0,1)	1	1	1	0.04
Contradictory	(1,0,1)	0	1	0	0.00
Psychological Impact Index (PII) = 4.16					

The psychological impact of post-Yagé visions on participants is profound and multifaceted, affecting both their emotional well-being and spiritual consciousness. In the short term, participants experience significant emotional release, while in the long term, many report personal transformations that contribute to greater inner peace, community connection, and harmony with nature. The results

obtained through the plithogenic IADOV method (psychological impact index = 4.16) reflect that visionary experiences are perceived positively in terms of psychological satisfaction, suggesting that Yagé plays a significant role in emotional healing and in the consolidation of a new worldview.

4.3 Social relevance of post-Yagé visions.

Post-Yagé visions, deeply linked to Indigenous traditions, strengthen cultural identity and community cohesion. These experiences connect participants with their spiritual heritage, revitalizing ancestral values and reinforcing the intergenerational transmission of knowledge.

Furthermore, they function as a mechanism for cultural preservation by legitimizing Indigenous spiritual practices in the face of globalization. The visions promote solidarity and mutual respect by fostering values such as the connection with nature and a sense of community belonging.

Together, these experiences not only ensure the continuity of traditional worldviews but also consolidate the relevance of spiritual practices as tools of cultural resistance and social renewal. The result of the plithogenic IADOV evaluation yielded a global social relevance index (IRS) of 4.20, indicating that participants perceive the social and cultural impact of post-Yagé visions very positively (see Table 5). This high index reflects the importance of the visions in preserving traditions and consolidating cultural values within Indigenous communities.

Table 5: Calculation of the global social relevance index (SRI). Source: Own elaboration.

Plithogenic criterion	Scale	Score (P)	Frequency (F)	$P \cdot F$	$\frac{F \cdot S}{n}$
Clearly satisfied	(1,0,0)	5	17	85	3.40
More satisfied than dissatisfied	(1,0.35,0.35)	4	3	12	0.48
Not defined	I	3	1	3	0.12
More dissatisfied than satisfied	(0.35, 0.35, 1)	2	2	4	0.16
Clearly dissatisfied	(0,0,1)	1	1	1	0.04
Contradictory	(1,0,1)	0	1	0	0.00
Social Relevance Index (SRI) = 4.20					

Post-Yagé visions have a profound impact on the social relevance of cultural traditions and values within Indigenous communities. Through these visionary experiences, cultural identity and ancestral knowledge are reaffirmed and preserved, contributing to the strengthening of community cohesion. Furthermore, post-Yagé visions play a crucial role in the transmission of cultural values and the validation of spiritual practices in the face of external influences. The results obtained through the plithogenic IADOV method indicate that these visions are considered highly relevant for communities in terms of their social impact and ability to strengthen cultural traditions.

4.4 Clarity in the Interpretation of post-Yagé Visions.

The interpretation of post-Yagé visions is essential for their understanding and preservation within Indigenous communities. These experiences, filled with symbolism and cultural metaphors, rely on oral tradition to transmit their meanings. The shared worldview facilitates collective understanding, while the shaman acts as a key guide to interpret and contextualize the visions in both spiritual and everyday terms. This process strengthens cultural identity and ensures the transmission of ancestral knowledge. The plithogenic IADOV method allows for the evaluation and quantification of clarity in interpretation, ensuring its value as part of the spiritual and cultural heritage of the communities (see Table 6).

Table 6: Evaluation of the clarity in the interpretation of post-Yagé visions. Source: Own elaboration.

Plithogenic criterion	Scale	Score (P)	Frequency (F)	$P \cdot F$	$\frac{F \cdot S}{n}$
Clearly satisfied	(1,0,0)	5	0	0	0.00
More satisfied than dissatisfied	(1,0.35,0.35)	4	1	4	0.16

Plithogenic criterion	Scale	Score (P)	Frequency (F)	$P \cdot F$	$\frac{F \cdot S}{n}$
Not defined	I	3	13	39	1.56
More dissatisfied than satisfied	(0,35, 0,35, 1)	2	10	20	0.80
Clearly dissatisfied	(0,0,1)	1	0	0	0.00
Contradictory	(1,0,1)	0	1	0	0.00
Interpretation Clarity Index (ICI) = 2.52					

The interpretation clarity index (ICI) is 2.52, indicating that, in general, post-Yagé visions are perceived as relatively clear in terms of their interpretation within the community. However, some participants face difficulties fully communicating their experiences, which is reflected in a moderate number of responses related to terms such as "Undefined" or "More dissatisfied."

Post-Yagé visions are clearly understood and communicated within Indigenous communities, especially by those who have a deep connection with the worldview and spiritual traditions. However, due to the metaphorical and abstract nature of the visions, some participants find challenges in fully conveying the meaning of their experiences, particularly when these meanings rely on complex symbolic language. Therefore, spiritual leaders play a crucial role in facilitating the interpretation of the visions, helping participants understand and explain their experiences.

4.5 Contributions of the interaction of the elements.

This analysis provides a detailed structure for understanding how the elements interact, their potential contradictions, and how their relative importance influences their collective effectiveness. Among them, the following can be observed:

- Creativity in visionary experiences: It fosters innovation and new perspectives, creating opportunities for disruptive changes. Its interaction with psychological impact triggers an emotional transformation in individuals and communities.
- Psychological impact: The emotional and cognitive changes resulting from psychological impact affect how people perceive and respond to experiences. Its interaction with social relevance ensures that the effects are not only personal but also collective, promoting social adaptation.
- Social relevance: It facilitates the social acceptance of innovative ideas, as well as interaction with creativity, ensuring that new proposals are meaningful in the social and cultural context. Meanwhile, clarity in interpretation ensures that these ideas are understood and applied by society.
- Clarity in interpretation: It enhances the communication of ideas and concepts by facilitating their adoption at both individual and collective levels. Its interaction with the other elements ensures that ideas are accessible, effective, and understood in the appropriate context.

On the other hand, plithogenic contradiction refers to the potential tension or conflict that arises when the interacting elements are not fully aligned. The evaluation of the degrees of contradiction between the elements is presented below (see Table 7).

Table 7: Contradiction of non-aligned elements. Source: Own elaboration.

Items	Plithogenic contradiction (Scale: low, medium, high)
Creativity in visionary experiences vs. psychological impact.	Medium: Creativity challenges psychological impact when novelty is not emotionally well-received.
Creativity in visionary experiences vs. social relevance.	Low: Although creativity can initially be challenging for social acceptance if it is relevant, it adapts easily.
Creativity in visionary experiences vs. Clarity in interpretation.	Low: Clarity facilitates the understanding of innovative ideas but increases the likelihood of contradictions if creativity is complex.

Items	Plithogenic contradiction (Scale: low, medium, high)
Psychological impact vs. social relevance.	Medium: Psychological impact can be intense, but if not aligned with social norms, there may be a disconnect.
Psychological impact vs. Clarity in interpretation.	Low: Clarity facilitates the understanding of psychological impact, although it increases the likelihood of confusion if not adequately explained.
Social relevance vs. Clarity in interpretation.	Low: Clarity is key to ensuring that social relevance is understood and applied correctly.

Psychological impact and clarity in interpretation are the most significant elements, as they are fundamental for the acceptance and understanding of ideas. Creativity and social relevance are crucial, but they depend on the other two elements to be effective in a social and psychological environment.

4.6 Discussion.

This study highlighted the complexity and richness of post-Yagé visionary experiences by emphasizing the need for illustrations as a means of capturing the essence of these lived moments. The visual representations, of a psychedelic nature, present themselves as a window into the inner world of individuals, revealing the diversity and depth of the visions experienced after the ingestion of Yagé.

Through a cultural approach, the project contributes to the understanding of the intersection between culture, spirituality, and cognition by interpreting the visions within an environment of ancestral traditions and beliefs. The research emphasizes the need to connect with the cultural roots of the Indigenous community, which is essential for appreciating the practices that still endure today.

Graphic representation has become an effective tool for communicating the experiences perceived during the trance, facilitating their interpretation, and understanding. Additionally, the study has highlighted the need to establish bridges between ancestral traditions and modernity, recognizing the cultural value of Indigenous communities as a step toward mutual understanding and respect in a globalized world.

The modeling of the IADOV plithogenic method, which included field visits and direct interviews with community members, provided an authentic and enriched perspective on the Yagé ceremony, enhancing the quality and validity of the results. Furthermore, an interesting question has been raised regarding the relationship between Yagé experience and creativity, opening a debate on how these practices influence individuals' artistic and creative expression.

However, it is crucial to expand the research to other Amazonian communities practicing Yagé rituals and other entheogens in order to gain a broader understanding of these practices. Therefore, an interdisciplinary approach is also recommended, integrating anthropology, psychology, and neuroscience for a better understanding of the effects and meanings of these rituals. Finally, it is suggested to delve deeper into the study of the indigenous worldview to better understand the philosophical and spiritual foundations of entheogen rituals in Amazonian communities.

5 Conclusion

The results obtained through the analysis conducted using the plithogenic IADOV have highlighted the interaction of key elements such as creativity in visionary experiences, psychological impact, social relevance, and clarity in interpretation. It has proven to be crucial in generating transformations both at the individual and collective levels. Despite the plithogenic contradictions between creativity and psychological impact, it has been observed that clarity in interpretation and an appropriately adjusted social relevance help resolve these tensions by optimizing the understanding of the experiences manifested during the Yagé ceremony. Furthermore, the study has emphasized the need to establish bridges between ancestral traditions and modernity, recognizing the cultural value of Indigenous communities as a step toward mutual understanding and respect in a globalized world. It has also highlighted the importance of preserving, documenting, and understanding Indigenous traditions, empha-

sizing the interaction between these traditions and contemporary society as a fundamental axis for cultural exchange and mutual enrichment. Additionally, the study suggests exploring, through longitudinal studies, the long-term effects of these experiences on different demographic groups and the impact of integration rituals on participants' emotional well-being.

References

- [1] C. M. Gómez Rincón, "The spiritual dimension of yage shamanism in Colombia," *Religions*, vol. 11, no. 7, p. 375, 2020.
- [2] C. E. McKinley, "'Prayer is universal': How integrative faith practices enable Indigenous peoples' persistence and resistance to transcend historical oppression," *Psychology of religion and spirituality*, vol. 16, no. 1, p. 114, 2024
- [3] H. Echeverri-Sanchez, "The Many Lives of a Shamanic Chondur: Using *Cyperus articulatus* in Yagé Shamanism of Southern Colombia," *Journal of Ethnobiology*, vol. 41, no. 2, pp. 263-276, 2021.
- [4] S. E. Rubin, I. Mørch, N. Olsen, and K. Nørtoft, "Important intergenerational transmission of knowledge in promotion of well-being and cultural identity in Greenland," *International Journal of Circumpolar Health*, vol. 83, no. 1, pp. 2-12, 2024.
- [5] K. Swancutt, "Dreams, Visions, and Worldmaking: Envisioning Anthropology Through Dreamscapes," *Annual Review of Anthropology*, vol. 53, no. 1, pp. 111-126, 2024.
- [6] B. Keegan, "Indigenous Religious Traditions: Terms, Histories, and Futures," *Indigenous Religious Traditions*, vol. 1, no. 2, p. 189, 2023.
- [7] L. Guzy, "Indigenous Shamanic Worldviews as Eco-cosmologies and Indigenous Knowledge Systems of Sustainability," *Religion and Development*, vol. 2, no. 3, pp. 418-444, 2024.
- [8] S. Avila, "Indigenous Peoples' Spiritual Rights to Medicinal Plants," *Ariz. J. Env't L. & Pol'y*, vol. 14, no. 2, p. 1, 2023.
- [9] O. L. Malapane, N. Chanza, and W. Musakwa, "Transmission of indigenous knowledge systems under changing landscapes within the shaved community, South Africa," *Environmental Science & Policy*, vol. 161, no. November, pp. 1-7, 2024/11/01/ 2024.
- [10] P. Gutiérrez *et al.*, "Plithogenic Iadov model to study university teaching practices in the complexity of the educational process of comprehensive training by competencies," *Neutrosophic Sets and Systems*, vol. 62, no. 1, pp. 79-83, 2023.
- [11] E. González Caballero, M. Leyva Vázquez, and F. Smarandache, "On neutrosophic uninorms," *Neutrosophic Sets and Systems*, vol. 45, no. 2021, pp. 340-348, 2021.
- [12] K. Jaramillo, J. Quilambaqui, and J. Yanez, "Blockchain in Healthcare from a Neutrosophic Analysis," *International Journal of Neutrosophic Science*, vol. 18, no. 3, pp. 177-188, 01/01 2022.
- [13] F. Smarandache, "Extensión de Soft Set a Hypersoft Set, y luego a Plithogenic Hypersoft Set," *Neutrosophic Computing and Machine Learning . ISSN 2574-1101*, vol. 25, no. Enero-Marzo, pp. 103-106, 2023.
- [14] F. Smarandache, "Plithogeny, Plithogenic Set, Logic, Probability and Statistics: A Short Review," *Journal of Computational and Cognitive Engineering*, vol. 1, no. 2, pp. 47-50, 2022.
- [15] Smarandache, F. (2023). The MultiAlism System of Thought. *Neutrosophic Sets and Systems*, 61(1), 31.
- [16] Vázquez, M. L., & Smarandache, F. (2024). Integrating Contradictory Perspectives in Latin American Philosophy: A MultiAlism Approach. *Neutrosophic Optimization and Intelligent Systems*, 3, 1-7.
- [17] García-Guano, A. J., Ruiz-Pinto, V. S., Paredes-Calderón, B. A., & López, M. E. L. (2024). Application of NCMs and MultiAlism in Indigenous Art Analysis. *Neutrosophic Sets and Systems*, 69, 1-10.

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