KEYWORDS: ***Nordeste tradition – Southeastern Bolivia – Continental networks – Dry Diagonal***

# RETHINKING THE NORDESTE TRADITION IN BOLIVIA: THE DRY DIAGONAL HYPOTHESIS

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**Abstract.** Since the late 1980s, researchers have perceived compelling similarities between rock paintings from the Chiquitanía region, southeastern Bolivia, and those associated with the Nordeste tradition pictograms first identified during the 1970s in Piauí and Rio Grande do Norte states, northeastern Brazil. Separated by almost 3000 km, the rock art similarities between these two South American regions have, for some time now, prompted the plausible existence of continental-wide networks of Amerindian cultural contact and exchange as early as the transition of Late Pleistocene and Early Holocene. In this paper, we propose a re-think of the idea that indigenous groups bearing the Nordeste tradition conceptual scheme were responsible for part of the rock art found in southeastern Bolivia by adding biogeographic, palaeoenvironmental, ethnoecological and ontological elements. We aim to outline a complementary hypothesis that may help explain some of the rock art aspects found in both areas, interconnected by the open and xeric neotropical biomes of the *Dry Diagonal*.

**Introduction**

Since the late 1980s, some rock art researchers in South America have perceived compelling similarities between rock paintings from the Chiquitanía region, southeastern Bolivia (Figs 1 and 2), and those from northeastern Brazil (e.g. Pia 1988; Querejazu-Lewis 1991). Particularly eye-catching, though not restricted to, were the similarities with the Nordeste tradition pictograms (e.g. Guidon 1984; Martin 1985; Pessis 1987) first identified during the 1970s in the Brazilian states of Piauí (PI) and Rio Grande do Norte (RN), a geographic setting distant almost 3000 kilometres from the Bolivian SE.

The rock art parallels between these two South American regions have prompted plausible conjectures regarding contact and interaction among Indigenous populations dispersed on a continental-wide scale echoing in rock art, processes already demonstrated by linguistic, ethnohistorical and ethnographic evidence (e.g. Urban 1992; for the case of the Arawakan languages dispersal see Hill and Santos-Granero 2002; for Tupian languages and pottery expansion see Noelli 2008). Whether or not resulting from the spread of the 'same' people, or better, their descendants, that reached Chiquitanía and then had contact and interacted with local indigenous populations, hybridising and reinventing themselves, these similarities reinforce the case for extensive Amerindian social networks allowing cultural exchange and circulation of ideas and practices over ample territories, crossing and interconnecting cultural-linguistic borders. Over the deep Indigenous history of the continent, these processes may have contributed to extensive rock art dispersals or stylistic diasporas, possibly as early as the transition between the Pleistocene and the Holocene, around 12,000 years ago, or even before.

However, to undertake thorough comparative studies of that scale, oriented towards a better understanding of rock art stylistic distribution, variability and homogeneity over vast geographic settings and its social and cultural implications, it is necessary that the archaeological evidence under contrast present comparable degrees of systematisation and representative sampling in their respective areas, while solidly established within equivalent levels of analytical reliability concerning formal and stylistic characterisations, chronological sequencing and relationships within their regional archaeological records. Unfortunately, that is hardly the case because while the Nordeste tradition of rock paintings is possibly the most studied rock art construct in Brazilian archaeology, the same is not valid for the Chiquitanía rock art, which was proportionally seldom studied. This imbalance, thus, represents an obstacle to further in-depth comparative analysis. Ideally, to overcome that research asymmetry, long-term systematic research and generations of scholars dedicated to that topic would be necessary, as was the case in the Brazilian NE.

Although acknowledging that gap, we share an optimistic perspective that current South American rock art research could revisit that early diasporic problem, which was laid dormant for quite some time,


***Figure 1.*** *Map of the surveyed area in the Chiquitanía region, SE Bolivia, with visited sites during 2022 fieldwork (map author: Paulo Rodrigo Simões, 2023).*

perhaps due to reasonable criticism concerning overly simplistic diffusionism and bringing forward contextual data capable of adding complementary information to that scenario, thus improving conditions for further hypothesis building and testing. Accordingly, we propose a rethink of the idea that indigenous groups bearing the Nordeste tradition conceptual mindset were responsible for, at least, a part of the rock art found in southeastern Bolivia by adding biogeographic, palaeoenvironmental, ethnoecological and ontological elements to the equation. Therefore, we aim to outline a complementary contextual hypothesis that may help explain some of the rock art aspects found in both areas, interconnected by the open and xeric neotropical biomes of the Dry Diagonal: a massive South American biogeographic corridor connecting Seasonally Dry Tropical Forests, Savannas and Chaco formations, which constitutes the mainstay of our proposal.

***Figure 2.*** *General views of Chiquitanía landscapes near Cueva Juan Miserendino site showing an ecotone between seasonally dry tropical forest (SDTF) and savanna with sandstone outcrops. A water stream drains to the plains of the Chaco biome on the horizon, invisible due to the smoke of anthropogenic bushfires (bottom). Photos RV, 2022.*

According to Gabriela Martin, one of the principal researchers of the Nordeste tradition phenomenon, its total geographic dispersion is an open question and, referring to Brazilian occurrences out of the northeast region, she reiterates that 'these are just a few examples that illustrate the long way yet to be walked through in the search for the trails of this rock art tradition' (Martin 2008: 271 [transl. RV]). This article targets that open question.

## Nordeste tradition – striving for a synthesis

The Nordeste tradition (NET) is one of the most systematically studied rock art taxonomic constructs in Brazilian Archaeology (e.g. Guidon 1975, 1984, 1989; Monzon 1981/1982; Martin 1982, 1985, 1997; Pessis 1984, 1987, 1989, 1992, 2003). NET pictograms have a fundamental iconicity expressed through a characteristic figurative narrativeness (narrativeness is 'the quality

that makes narrative not merely present but essential'; Morson 2003: 61), once defined by Leroi-Gourhan as an elementary synthetic figurativism (Guidon 1975: 64). The subject matter depicted and purposed thematic in the configuration of lively scenes 'representing actions linked either to everyday life or to ceremonies or myths' (Guidon 1989: 65) could be partially identified, thus constituting compositional arrangements where some of the rules of engagement among the figures were intuitively perceived as if telling visual stories (see Figs 3 to 8).

This property conveyed to the contemporary observer a sense of translatability, or intention-reading, tricky to achieve when dealing with ancient visual codes, that has stood out to generations of rock art researchers as a compelling analytical drive to search for those readable intentionalities conflated into cultural regularities across time and space. Many Brazilian and foreign archaeologists followed that pathway, having their attention drawn to the Nordeste tradition phenomenon over the last fifty years and throughout a wide area encompassing the northeast region of Brazil and elsewhere.

***Figure 3.*** *A detail of the panel of Casa Santa site, a formidable exemplar of the Seridó sub-tradition of NET, in Carnaúba dos Dantas municipality, Rio Grande do Norte state (RN), Brazil. It shows multiple superimpositions among anthropomorphous, zoomorphic and geometric motifs in a complex stratigraphy of diverse pictorial moments. External observers can intuitively perceive the arrangement of anthropomorphous and zoomorphic figures conveying movement in scenic configurations, performing actions and holding objects, besides geometric motifs not intuitively associated with the recognisable figures, though seemingly synchronic to some of them (photo: Joadson Silva - JS, 2023; DStretch: RV, 2023).*

However, the research history of this phenomenon started even earlier. The first account describing the formal elements later known as belonging to the Nordeste tradition appeared in a 1925 manuscript by the insightful amateur historian and archaeologist José de Azevedo Dantas, entitled *Indícios de uma civilização antiquíssima* (Evidence of an age-old civilisation). Recovered by the Spanish archaeologist based in Pernambuco state, Gabriela Martin, and published in 1994, the painted rock art type described in that manuscript was the basis for Martin's definition of the Seridó style of rock paintings (Martin 1982), later described as a sub-tradition inside the broader scope of the NET (e.g. Martin 1997).

Dantas visited and recorded in free-hand drawings several rockshelters with Seridó paintings, which he described as '[…] painted figures on the rock surface, red-coloured, depicting human figures, instruments, animals, birds, and other varieties' (Dantas 1994: 26, referring to paintings at the Serra do Xique-Xique location). Reading further into his manuscript, one can find similar passages stating, for instance: 'There are many human figures painted in red and yellow, with

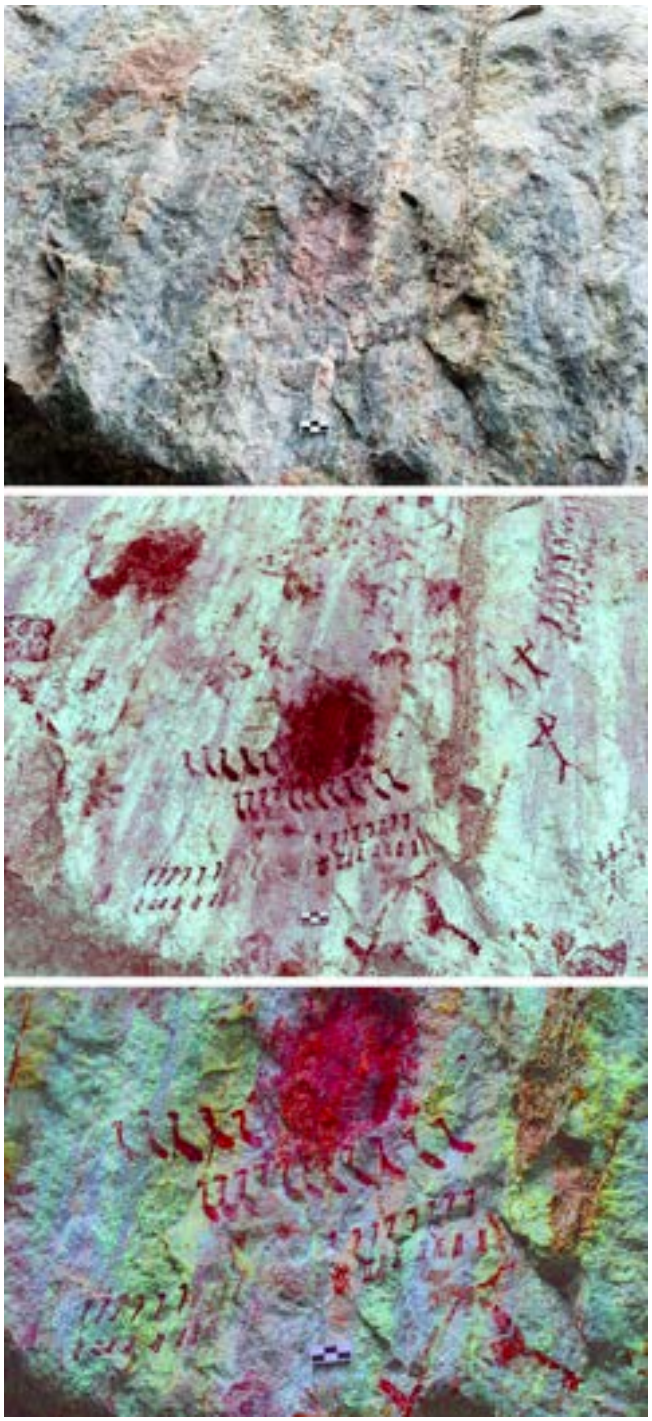

***Figure 4.*** *Possible representations of flocks of* Rhea americana *on the gneissic outcrop surface of the Mirador de Parelhas site, RN, Brazil. Top image: general view of the 'rhea' flock depictions, hard to see under natural light due to mineral and biological accretions covering the paintings. Middle: DStretch enhancement of the same panel frame with rows of zoomorphs seemingly surrounded by dynamic anthropomorphs in a hunting approach, some of them with feet and toes (top right corner). Bottom: closer view in DStretch with ornithomorph details and an anthropomorph holding objects in both hands but apparently not synchronous with the ornithomorphs (photo and DStretch: JS, 2023).*

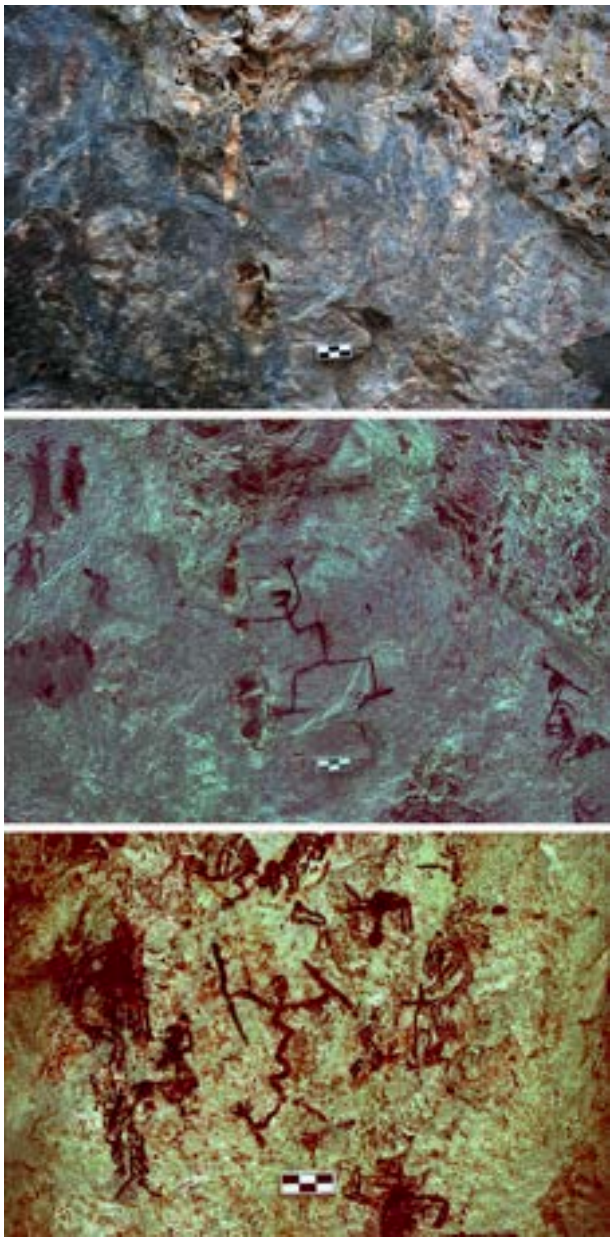

***Figure 5.*** *Atypical anthropomorphous figures, showing feet with toes and hands with fingers. An exemplar covered by soot from anthropogenic bushfire, preventing clear visualisation under natural light (top) and DStretch enhancement (middle). The bottom image is another example of a similar layout. Mirador de Parelhas site, RN, Brazil. Feet with toes and hands with fingers are a rare anatomical element in general NET anthropomorphism but distinctively recurrent in the Mirador de Parelhas site, as well as in Cueva Juan Miserendino and Quitunuquina 1 sites, SE Bolivia, presented ahead (photo and DStretch: JS, 2023 / RV 2024).*

a superior quantity of animals, instruments, adornments, [...]' (Dantas 1994: 29, referring to the paintings found at the Mirador de Parelhas site [Figs 4 and 5]).

Azevedo Dantas has noted gender, social and functional differences among the anthropomor-

***Figure 6.*** *One of the multi-layered and polychronic panels with several elements of NET (showing multiple chrono-styles of Várzea Grande sub-tradition) in the Toca do Boqueirão da Pedra Furada site, Serra da Capivara National Park, Piauí (PI), Brazil. Top image: an overview of a niche-situated panel; bottom image: a close-up shot of the same panel, showing different conceptions of anthropomorphs superimposing and juxtaposing each other, ranging from stylised anthropomorphous round and red figures from an earlier moment to later characteristically dynamic anthropomorphs (greyish) performing more clearly conceivable actions such as 'dancing'. The roll of little red and white figures at the bottom can also be highly stylised anthropomorphous motifs from a posterior phase (chrono-style) of NET (photos: RV, 2016).*

phous figures, judging from distinctions in the adornments, clothes, instruments, body anatomy and behavioural displays of the portrayed motifs through their gestures, postures and interactions. Fifty years later, those characteristics will reappear in the studies of Valentin Calderón (1970, 1983) and Niède Guidon (1975, 1979) regarding rock paintings in the Bahia and Piauí states, respectively. The former was a Spanish researcher who became the first professional archaeologist to seemingly describe a manifestation of the Nordeste tradition, naming it the *Jaboticaba* phase of the *Realista* tradition (possibly also the *Orobó* phase of the same tradition), back in the late sixties and early seventies. The latter became internationally acknowledged as the proper discoverer of the Nordeste tradition, proposing the first comprehensive and in-depth description of that archaeological phenomenon by the mid-seventies, initially called the Várzea Grande rock painting style from southeastern Piauí state.

Valentin Calderón (1967, 1970, 1983) found rock paintings in the Chapada Diamantina region that he described as: '[...] hunting, dancing, harvesting scenes [...] with impressive

***Figure 7.*** *Zoomorphic and anthropomorphous depictions, some of them composing scenes attributed to NET's Várzea Grande sub-tradition, in the Toca do Boqueirão da Pedra Furada site, Serra da Capivara National Park, PI, Brazil. Below is a detail extracted from the top image showing a flock of possible* Rhea americana *depictions in red hue superposed by two others in faded yellow. Natural light on the right side and DStretch modification on the left (photos and DStretch: RV, 2016).*

***Figure 8.*** *Zoomorphic and anthropomorphous depictions, some of them attributable to NET's Várzea Grande sub-tradition, in the Toca do Boqueirão da Pedra Furada, Serra da Capivara National Park, PI, Brazil. Below is a detail extracted from the top image showing a scene of playful acrobatic anthropomorphs (photos: RV, 2016).*

naturalness' (Calderón 1970: 10 [transl. RV]). Those paintings seemed to carry a '[...] sharp intention to reproduce the human and animal forms through greater reality and dynamism' (ibid.: 10). The discovery of pictograms with those formal attributes led him to propose the Realista tradition of rock paintings, describing it similarly to Dantas accounts, despite being distant apart more than 800 km. Excerpts like: 'They are moving figures, sometimes violent, with profuse details that allow the identification of the actions they perform' (ibid.: 10). Or: '[...] the intention to reproduce men, animals and plants, with the topmost rigour allowed by the technical skill of their authors' (ibid.: 14), translates that correspondence, reaching a peak when describing the Jaboticaba phase: 'Human figures represented almost always performing various actions: dancing, hunting, war, harvesting, etc., birds, fish and artefacts [...], with [...] very dynamic silhouettes, little schematised, with an abundance of additional details; marked intention to reproduce the model with maximum realism possible' (ibid.: 15). These passages denounce that same intuitive recognisability that permeates the core of what will later be called the Nordeste tradition.

In 1975, Niède Guidon made the first proposal to define the essential features of NET in an in-depth research report where she analysed a preliminary sample of the first sites surveyed and recorded back in 1973, under the context of one of the Franco-Brazilian Missions held over the seventies. By then, she classified that rock art as the Várzea Grande style of rock paintings (Figs 6, 7 and 8), giving the reader the following assessment:

> we could tell that the artist tries to characterise the figure with certain naturalistic features; it is thanks to these elements that we can recognise the genera and, sometimes, even the species represented. These features also give a certain unity to the rock art figures of this region, which we classify as being synthetic figurative (3). (Guidon 1975: 37 [transl. RV]).

It is quite informative to recover that specific endnote (No. 3) she referred to in this part, for it quotes André Leroi-Gourhan's impressions on Várzea Grande style images eventually brought to his attention by Guidon while she was having classes with him. Accordingly:

> 3. Synthetic figurative: 'the lines express the essence of the forms of the figured subject, without translating the fine modulations of the optically real contours. It is common to observe that the identifying details (antlers, horns, ears, tail, dewlap …) are pushed more towards analysis than the other parts of the body (in particular, the extremities). The synthetic figurative marks in all the arts are the most dynamic stages, between the geometric, which tends towards non-figuration and the analytic, which culminates in optical exactness. A. Leroi-Gourhan, Course of 1970/1971 at the College de France. A. Leroi-Gourhan suggested that we classify the drawings of Várzea Grande as elementary synthetic figurative at the very limit of geometric figurative (Guidon 1975: 64 [transl. RV]).

As the studies progressed, visual anthropologist and rock art scholar Anne-Marie Pessis joined Guidon's team, bringing inspired collaboration from visual anthropology methods based on the exuberant iconic and scenographic properties of the Várzea Grande style. These properties stem from the articulation among human and non-human biomorphs, artefact representations, and non-iconic geometric motifs, structured under recognisable formalised themes or patterns of collective and individual actions, readable as scenes of live movement and intentionality, despite being structured under a codification that does not mimic the natural reality (e.g. Pessis 1989).

While deepening Guidon's analysis, Pessis unveiled a sequence of discrete and related formal differences inside the Várzea Grande phenomenon. Those internal variations in the technique, morphology and other parameters, coupled with clearly visible and systematic superpositions, indicated that the 'style' was likely to be comprised of a mosaic of different behaviours and expressions accumulated through time in a long run of cultural-historic and environmental transformations, pointing to internal stylistic diversity rather than a straightforward unicity. Thus, over the early eighties, Pessis had a critical role in that classificatory and analytical turn, fine-tuning the taxonomic process, as the Várzea Grande style proved more complex than previously suspected. Resorting to one of Pessis' last efforts (2003: 83–85 [transl. RV]) for synthesising the NET conceptual character, one may find of particular interest the following passage:

> [S]o far, according to the confirmed data, this tradition has an antiquity of 12,000 years. It includes figures recognisable by any observer, arranged on the rocky walls, representing actions and events. They are recognisable figures of anthropomorphic nature and other animal species. There are also representations of plants and objects […]. Due to their complexity, diversity, and the way the figures relate to each other, the paintings of this tradition are a rich source of information that allows the reconstitution of aspects of the life of human communities in prehistoric times. The figure set provides information about everyday life, religious beliefs, ritual manifestations, ornaments, weapons, and other objects. Made with a technical refinement that reflects pictorial proficiency and mastery of graphic resources, the paintings show the concern in providing the observer with the essential identification elements that allow him to recognise the figures. The scenes depicted in these paintings show the existence of thematic choices that are identifiable and recognisable by any observer. They also exhibit sets of figures representing actions through postures and gestures that show phases of activities fixed in a clearly described instant. It is not just the image narrative that characterises these paintings, as different cultural groups worldwide have painted figures of narrative character. What differentiates them are the theme and the staging modalities used in each situation. When observing the repeated presence of depictions of actions performed by figures, human or non-human, in which the theme is unidentifiable and only postures and gestures are perceived, the observer has an emblematic marker that can be useful to recognise a cultural origin. These emblematic markers become instruments of the cultural characterisation of the narrative. Despite its narrative character, the paintings sometimes appear with unrecognisable figures similar to conventional signs expressing coded information complementary to the image content.

The excerpt above expresses that the general ethos of Nordeste tradition is not only centred on the figurative character of its pictorial narratives (e.g. Stansbury-O'Donnell 1999: 175) but also comprises a particular thematic dimension. It is related to a repertoire of recurrent graphic elements structured into cross-culturally recognisable scenes, granting a broad visual understanding of patterned themes of actions performed by depicted anthropomorphous and zoomorphic collectives and individuals. Therefore, it is not only a matter of ways of doing, in the stylistic sense (e.g. Hodder 1990; Hegmon 1992), or of sorting out from a vast array of possibilities in terms of choices (e.g. Sackett 1982) for the graphic rendering of the sensory world. Accordingly, the coupling of narrative visual language with expressive thematic patterning in the form of this repertoire of emblematic scenes seems to identify the general character of this rock art tradition. These emblematically repeated scenes, which may correspond to a recursive graphic coding of cultural behaviour displays, would signal information on social identity (e.g. see 'Emblemic Style' in Wiessner 1983).

Concomitantly to the advancements conducted by Guidon and Pessis, Gabriela Martin (1982, 1985) rediscovered the Seridó style of rock paintings in the Rio Grande do Norte state, 800 km east of the southeastern Piauí area (Serra da Capivara National Park), realising and arguing for a very consistent stylistic interconnection with Várzea Grande, soon acknowledged by Guidon and Pessis. Therefore, Martin demonstrated the extensive intraregional coverage of NET-related phenomena, giving full archaeological recognition of what Azevedo Dantas pointed out almost a century ago, connecting it with a broader regional context. Subsequent research in those geographic areas, over the eighties and nineties, consecrated core information defining that rock art tradition dispersed throughout northeastern Brazil materialised in two sub-traditions characterised by shared pictorial narratives while contrasted by varied, internally recurrent sets of themes in each area. Pessis and Martin (2020) have recently resumed previous formal definitions emphasising the thematic recurrence in the Seridó sub-tradition. Accordingly:

> The general characterisation of this pictorial tradition consists of small-sized figures (rarely more than 10 cm in height), with scenes showing actions through human postures and gestures and those of groups of animals. The diversity of figures, their technical characteristics, the manner of their distribution over the rock face, the occurrence of emblematic scenes, and the recognition of the chosen themes

> allowed the identification of the graphic pattern of a cultural horizon known as Nordeste tradition. [...] The narrativity of the paintings, representing scenes of daily and ceremonial lives, is a crucial indicator of the understanding of the priority themes among the human groups then settled in the southeastern Piauí region. [...] Its major characteristics are the presence of recognisable figures and how they interact in depicting events. Produced with enhanced technical skill and reflecting the mastery of graphic resources, these paintings provide the observer with the essential elements to recognise what they depict. Through postures and gestures, they show figures representing actions. What differentiates them are the thematic choices and the modes of mise-en-scène used in each situation. Over the millennia in which the making of the Nordeste Tradition paintings took place, regularly repeated themes appeared over its evolution. However, these regularities appeared within different modes of staging such themes representing rituals, ludic or ceremonial, hunting and sexual scenes' (Pessis and Martin 2020: 20–23 [transl. RV]).

Collectively, the Várzea Grande and Seridó early styles gave birth to the understanding that these manifestations could constitute a cohesive hunter-gatherer cultural horizon, both geographically extensive and chronologically deep, with regionally dispersed graphic identities, different though visibly relatable. Therefore, any reasonable account of that research history should consider Guidon, Pessis and Martin as the three pioneer mothers of the Nordeste tradition investigation.

After this brief review, which is far from exhaustive, leaving aside relevant sources (e.g. Morales Jr 2002; Silva 2008), emerges a perspective that the Nordeste tradition phenomenon has a wide geographical dispersion throughout most of the Brazilian northeast region and beyond, as observed by Guidon (1989a: 7) and others (e.g. Monzon 1981/1982; Schmitz et al. 1986; Prous 1991; Solá 1994; Prous and Baeta 2001; Prous and Ribeiro 2005; Castaño-Uribe 2019). We intend to reexamine but a fraction of the corpus of evidence available for some time now, indicating that the dispersion of this cultural horizon may have continental proportions[1]. Our focus will target a thought-provoking sample of rock art from the Chiquitanía region, Bolivia.

**Nordeste tradition in Bolivia**

Despite astonishing similarities between rock art in northeastern Brazil and southeastern Bolivia, no scientific evidence has been established. These visual resemblances have been noted since the eighties, one decade after the rock paintings pertaining to Nordeste tradition (NET) in the state of Piauí commenced to be studied thoroughly in Brazil.

In Brazil, Niède Guidon, Anne-Marie Pessis and Gabriela Martin, as stated above, deepened (based on previous studies) knowledge about various aspects of human presence in Late Pleistocene and Early Holocene periods in northeastern Brazil, including Guidon's initiative in 1986 of creating the Museum of the American Man Foundation, that facilitated financed archaeological and rock art projects in the region, with surprising results, especially using archaeological excavations.

In Bolivia, Gabriella Erica Pia, at the beginning of the eighties, in her rock art studies in Chiquitanía (southeast Bolivia), found and mentioned similarities between part of the rock art she was investigating and rock art in Brazil, mainly in the state of Piauí. Soon after, Roy Querejazu Lewis (then President of SIARB), taking into account a comment by Niède Guidon and Agheda Vilhena Vialou during the AURA Congress in Darwin in 1988, after his presentation on Bolivian rock art (which included a drawing by Erica Pia), about similarities in some rock art manifestations in Bolivia and Brazil, started to investigate the possibility of finding other rock art sites with such similarities. Three rock art sites in the Santa Cruz valleys (where the Andes descend their heights, giving place to the flatter lowlands) were identified, bearing a similar concept to NET rock art.

Consequently, while NET paintings were systematically and scientifically investigated in Brazil, in Bolivia, the pioneering efforts of Pia and Querejazu were taking their first steps while being conscious of these similarities. These two dissimilar research trajectories (in Brazil and Bolivia) explain the untested situation of the hypothesis of an extension of NET rock art up to southeast Bolivia. Nevertheless, in Bolivia, the research foundation stone had been placed.

In what has been written about the subject in Bolivia, there have been some mentions (based on secondary sources), about NET characteristics in Bolivian rock art, in an article by Strecker, Kaifler, Methfessel and Taboada, 2015 (based on André Prous and Loredana Ribeiro); in a book, *El Relato de la Historia* (Barbery, Callisaya and Espada) in 2019; and in 2022, also based on André Prous, in a book by Strecker, Taboada and Lima (*Arte rupestre de roboré – guía para visitantes*).

On the other hand, mentions of rock art similarities in Brazil and Bolivia, based on fieldwork, were published by Erica G. Pia in SIARB's No. 2 (1988), in her article entitled 'Los distintos momentos estilísticos encontrados en las pinturas rupestres de las áreas de Roboré, Santiago y San José en el oriente Boliviano',

1 Not to mention manifestations of seemingly related phenomena outside South America. See, for instance, remarkable resemblances with the 'red linear style' of rock paintings from the Guadalupe Mountains, New Mexico, USA (e.g. Billo et al. 2011). These are dated much later than those associated with the South American Nordeste tradition (see Steelman et al. 2019 for samples of that phenomenon directly dated between 4400 years and 1520 years BP). However, the 'red linear style' is way out of our present scope, and the plausibility of historical relatedness remains detached from a realistic hypothetical spectrum, considering the available evidence so far.

where her main observations (also mentioned in other of her writings) were stated.

Likewise, in what refers to similarities between rock paintings in some rock art sites in Bolivia and, specifically, with NET paintings, based on fieldwork, that have been published, there are some pioneer works. Roy Querejazu Lewis was the author, in 1991, of a journal entitled 'Arte rupestre del Departamento de Santa Cruz'; in 2014, the book, *El arte rupestre en el límite Andino Amazónico (Cochabamba – Santa Cruz)*; and in 2019, *El arte rupestre en Samaipata y alrededores.*

Although not directly related to NET, Pia's work refers mainly to her interpretation of different stylistic developments in Chiquitanía. She postulates a chronological transformation from 'naturalistic' figures to 'geometric – symbolic' motifs. While referring to 'contacts' with boundary areas such as Mutún, Guarayos, Andean zones and the Pacific coast, she mentions similar paintings in places more to the east in Brazil, in the state of Piauí, with 'the same birds, the same ostriches and man – ostrich, the same man – toad, and also the same men with evidenced knees (N. Guidon 1975, Pessis 1984, Monzon 1981/82)'. (Pia 1988: 40–52).

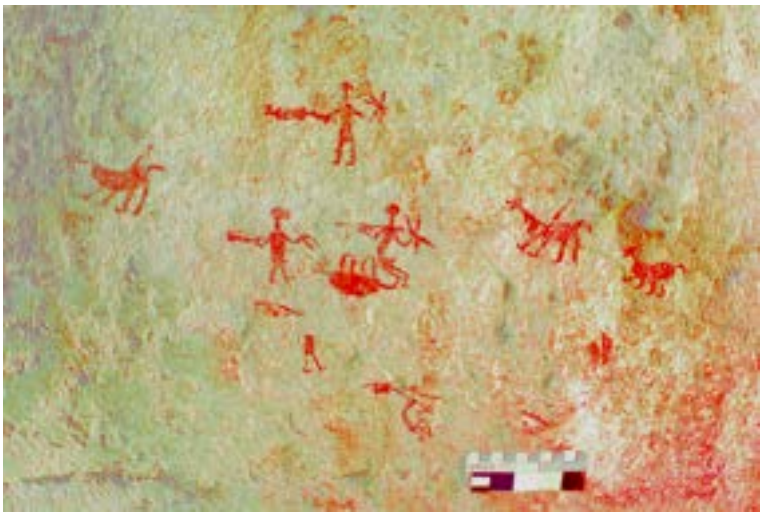

***Figure 9.*** *Las Guitarras site 'hunting scene', though bearing an elementary synthetic figurative style, does not tightly hold to the formal codes attributed to NET in its core areas (e.g. depiction of movement and dynamism in the apex of bodily performance, in clearly defined postural timing). Whether this may result from space, time, social and functional variations, it could also be the case that not all anthropomorphous pictorial narrativity expressed through scenes in South American rock paintings should be readily assumed to belong to that tradition. Notwithstanding, a general conceptual resemblance with NET is present in this panel, leading the observer to think about relationships, even though out of the Chiquitanía region (photo and DStretch: Clovis Cárdenas 2015).*

In 2022, NET investigations in Bolivia gained the invaluable participation of Raoni Valle (Brazilian rock art expert from the Federal University of Western Pará). This new and initial research effort, documenting and analysing five rock art sites in Chiquitanía, had the support of CEPAD (Centro para la Participación y el Desarrollo Humano Sostenible). The product of this endeavour is a report entitled 'Informe de evaluación de sitios con arte rupestre en la región de Roboré'.

Rock art in Chiquitanía (southeastern Bolivia) is a complex product of multi-traditional, and in consequence, multi-stylistic executions, all of it, within a diachronic development that took place during several periods, in which, seemingly, NET rock art influence formed part of this puzzling cultural mosaic. The construction of this critical historical, cultural sequence is only now taking its first steps. What is needed from now on is a team with knowledge of the theme, expertise in research, adequate financial resources and a long binational or internationally coordinated research project.

Based on a preliminary panorama of rock art sites in southeastern Bolivia (Chiquitanía), in the surrounding areas of Santiago, Roboré and San José, there are more than 80 known rock art sites. Fourty-three have been mentioned in *Relato de la Historia* (Barbery et al. 2019). The book includes good photographic coverage. Correspondingly, according to our comparative evaluation, of the 43 rock art sites, 14 contain a possible NET rock art concept. The referred sites are Cerro Banquete II, Chorro San Luis I, Chorro San Luis II, Cueva Juan Miserendino, La Torta, Paurito II, Polígono, Quirino, Rómulo VII, San Sabá (El Manantial), Santa Bárbara II, Santa Bárbara III, Hermanos II and Yororobá (with four specific sites).

The 14 rock art sites mentioned above contain conceptual similarities with the following rock art sites in Brazil: In Piauí state, Toca do Pinga Velho, Toca do Paraguaio, Toca do Baixão Verde, Toca do Baixão do Perna II, Toca da Entrada do Baixão da Vaca, Toca do Meio, Toca da Extrema II; in Rio Grande do Norte state, Xique-Xique I, Mirador de Parelhas, Casa Santa and Serrote das Areias; and in Minas Gerais state, the Toca do Baixão do Mato and Lapa do Ballet. Furthermore, six other rock art sites in the same Bolivian region also have conceptual similarities with NET paintings in general, although, for the moment, without a defined and identified rock art site in northeastern Brazil.[2].

2 The list of correspondences between specific Brazilian and Bolivian sites presented above is tentative and non-exhaustive, ordinating similarities perceived by the first author (RQL) based on published visual evidence from the referred Brazilian sites and extensive fieldwork in Bolivia. The second author (RV) based his impression on what he saw and recorded in the restricted sample of five sites visited in 2022 and suggested prominent similarities in two of them, Cueva Juan Miserendino and El Manantial (and later in Quitunuquina 1, after photos

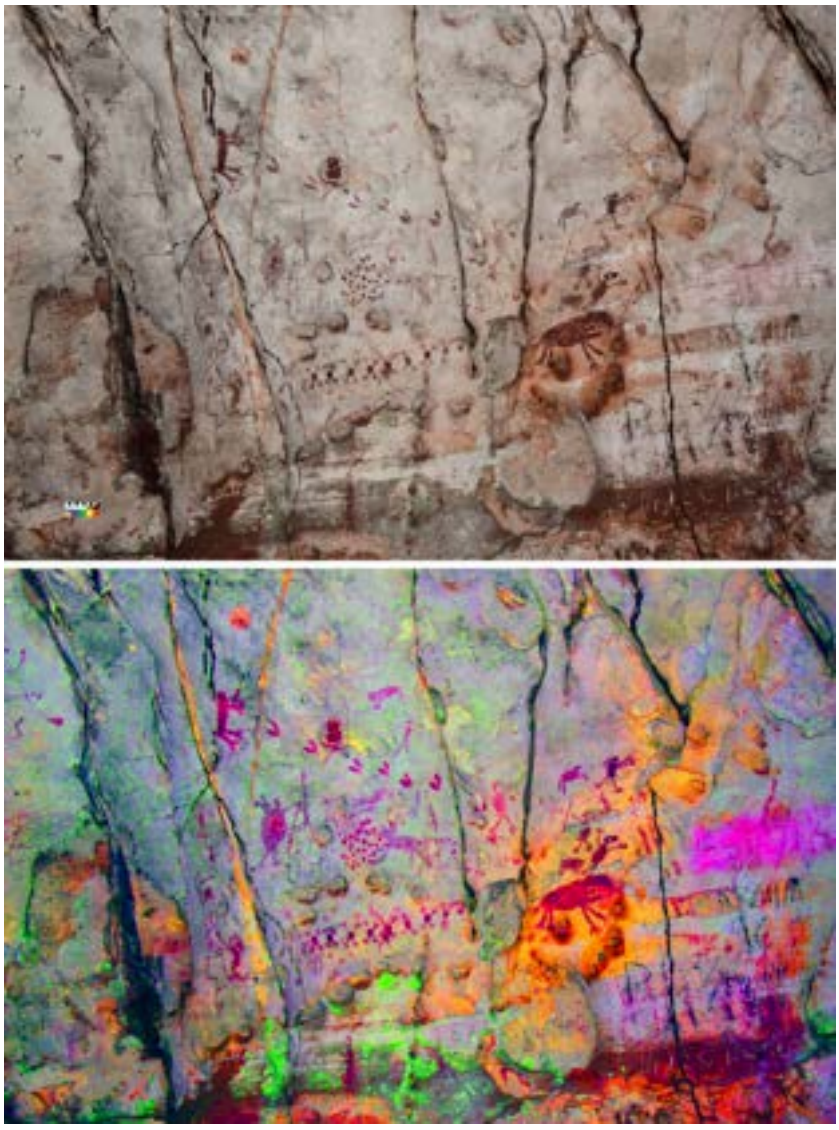

***Figure 10.*** *Cueva Juan Miserendino's paintings, a general view of a panel with anthropomorphs and zoomorphs displaying dynamic performativity, some of which are composing synchronic scenes and some other associations are diachronic, whether evidenced by superimpositions, discrepant states of preservation, or both (photo and DStretch: RV, 2022).*

In 2022, both authors analysed and documented Cueva Las Guitarras in the Santa Cruz valleys, which contains astonishing small 'hunting scenes' (Fig. 9). This site, together with Las Lauras II (Querejazu Lewis 2014: 128–129; 2019: 84–90), Verdecillo, Cueva Don Armando and Cueva del Tirino, constitute the possible NET rock art similarity corpus in the Santa Cruz valleys, which could mean that these cultural expressions reached this territory proceeding from Chiquitanía.

Overall, taking into account the rock art similarities in Chiquitanía (southeastern Bolivia contiguous with Mato Grasso in Brazil) and the Santa Cruz valleys (in between the last Andean mountainous region in the Department of Santa Cruz), it is of utmost importance to mention that the 'possible NET-related rock art corpus' also includes possible Agreste tradition and, especially, Seridó sub-tradition rock art manifestations.

In Chiquitanía, the authors investigated together (in 2022) four rock art sites: El Manantial, San Luis II, Motacú and San Silvestre. All four have various styles pertaining to different execution periods and, in consequence, different cultural and regional developments. Those pertaining to ceramist-agricultural cultures have their rock art manifestations, in many cases, superimposed over hunter-gatherer expressions. This proves the cultural continuity in rock art production in the region. The four sites also suggest the presence of NET rock art influence.

San Luis II and San Silvestre have an impressive conglomeration of paintings, with many superimpositions, indicating that the panels in question were used and reused for a considerable time and in different phases.

The visual likeness with sites, traditions and sub-traditions in Brazil is evident. For instance, in El Manantial, the 'piyo' representations (*Rhea americana*?) resemble scenes in rock art panels of the Seridó sub-tradition of NET, in the Mirador de Parelhas site, in Rio Grande do Norte state (see Fig. 22). A 'ludic scene' in San Silvestre resembles those of the Seridó and Várzea Grande sub-traditions (Asón and Martin 2000). In this same Bolivian site, front human figures with an oval body and a small round head on top, without neck, and short extremities, similar to NET

provided by RQL), with the Seridó sub-tradition of NET, particularly assemblages from the Mirador de Parelhas and Casa Santa sites in the Rio Grande do Norte state (therefore, these inclusions in the list above, besides Lapa do Ballet site in Minas Gerais also included afterwards). Regarding formal similarities with the Agreste tradition in the Chiquitano sample examined, RV deemed it still elusive to indicate a possible connection and that independent convergence could also be a cause. Due to these restrictions, the authors decided to centre on resemblances only with the Nordeste tradition, mainly in the Cueva Juan Miserendino sample, plus a few more punctual cases. Although based on empirically educated opinions, these are subjective, non-scientific statements. Therefore, the utility of pinpointing specific sites here and there if the authors did not conduct direct detailed observation and careful documentation on those sites in both countries, though suggestive, remains limited.

rock art representations in the Serra do Giz site, Pernambuco state, Brazilian northeast. Alternatively, zoomorphic figures seen from the side, bodies fully painted resembling NET paintings in São Raimundo Nonato municipality, Piauí. Of course, these are speculative, non-scientific assumptions that remain untested. Nevertheless, the similarities do exist. To ignore this situation would also be non-scientific.

Both authors (RQL and RV) also analysed and documented Cueva Juan Miserendino (Figs 10 to 19), the rock art site in Bolivia bearing the most evident similarities to Seridó sub-tradition in Brazil. They did it on different occasions. Querejazu in 2012, and Valle in 2022. What they saw was rather impressive, leading them to consider that Cueva Juan Miserendino constitutes, so far, the best-case scenario in all Chiquitanía regarding correspondences to graphic concepts[3] in northeastern Brazil. Further comments on Cueva Juan Miserendino's rock art will follow in 'The Dry Diagonal Hypothesis' section.

The documentation and analysis of sites in Chiquitanía that could

***Figure 11.*** *A more detailed view of the previous panel showing diachronic and synchronic interactions among zoomorphs and anthropomorphs on Cueva Juan Miserendino walls. On the left, an overwhelming anthropomorph with open arms seems to scream with his expressive crescent-shaped head. Noteworthy is the seeming depiction of two sets of ungulate tracks composing trails over the pictorial space as if a metaphor for the natural space, where those graphic beings were walking their routes, intentionally superposing and interacting with older zoomorphs and anthropomorphs, ending on their zoomorphic bodies. The smaller zoomorph was deliberately placed inside the expressive anthropomorphous figure as if performing an ontological infusion, constituting the last phase of Indigenous paintings in this part of the site walls, pre-dating the contemporary graffiti. (photo and DStretch: RV, 2022).*

3 After some discussion, the authors have reached an instrumental consensus regarding the notion of *graphic concept*, associating it with the synthesis of the rock art visual character, its graphic conventions and depicted themes, expressing how the production of an image or visual idea conceives the idiosyncrasy of a given cultural context or its *ethos* (e.g. Stansbury-O'Donnel 1999). That led them to consider how *tradition* aligns with the elements of culture passed down through generations (vertically), transmissible intra-generationally (horizontally), among cultures, or otherwise. Unable to precisely identify these differences in rock art matters without ethnographic support, they still regard useful the general understanding of archaeological tradition granted, at least since Willey and Phillips (1958), implying a broad regularity in space and time of formal attributes. Although geographic and time distances could lead to stylistic differences, images of the same pictorial tradition or sub-tradition would contain a similar idiosyncratic conceptual scheme or graphic ethos.

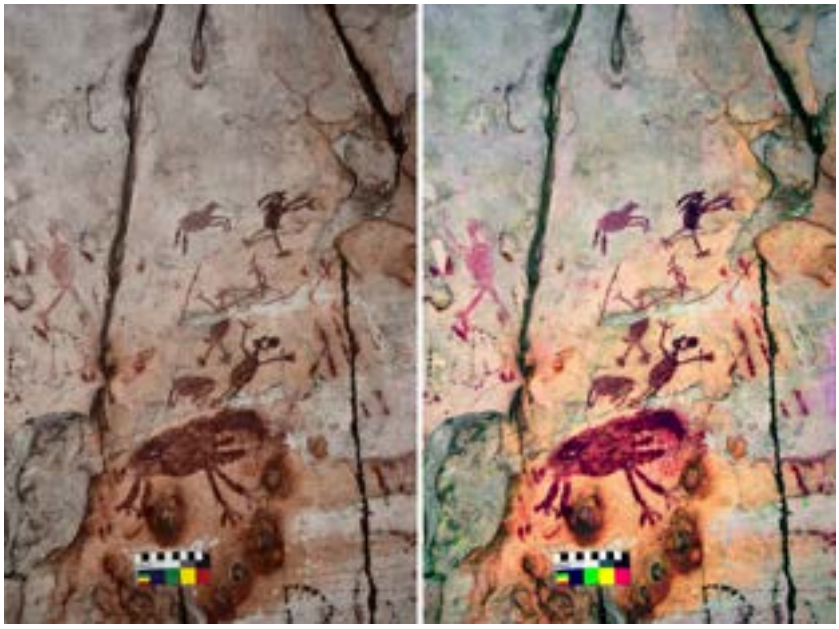

***Figure 12.*** *Another detail of the same panel with a dynamic group of synchronic anthropomorphs and zoomorphs in the centre of the image. Two zoomorphs seem to be chasing fleeing anthropomorphs, while in the middle, a third anthropomorph, with open arms, is closely surrounded by seeming artefacts, maybe hunting gear(?). The bottom anthropomorph, with an intriguing round shape close to the open mouth, has one of the feet superposed by the zoomorphic figure at the base of the frame, indicating that this is a later addition. Technique, size, colour and style also differ between them. However, on top of what seems to be the small tail of this larger zoomorph, an ungulate track mark steps over, following one of the trails seen in Figure 11 (photo and DStretch: RV, 2022–2024).*

***Figure 13.*** *A diachronic scene presenting the interaction between two 'anthropomorphous' figures. The older one has odd anatomical features and dimensions, suggesting an other-than-human person; the latter looks like most anthropomorphous figures on this site and seems to hold a hooked stem stuck in the head of the former, possibly a dart and, therefore, may correspond to another expression of hunting action(?). The detail (right) shows the superposition of the hand on the stem end, with different corresponding preservation states, thus indicating age difference (photos and DStretch: RV, 2022–2023).*

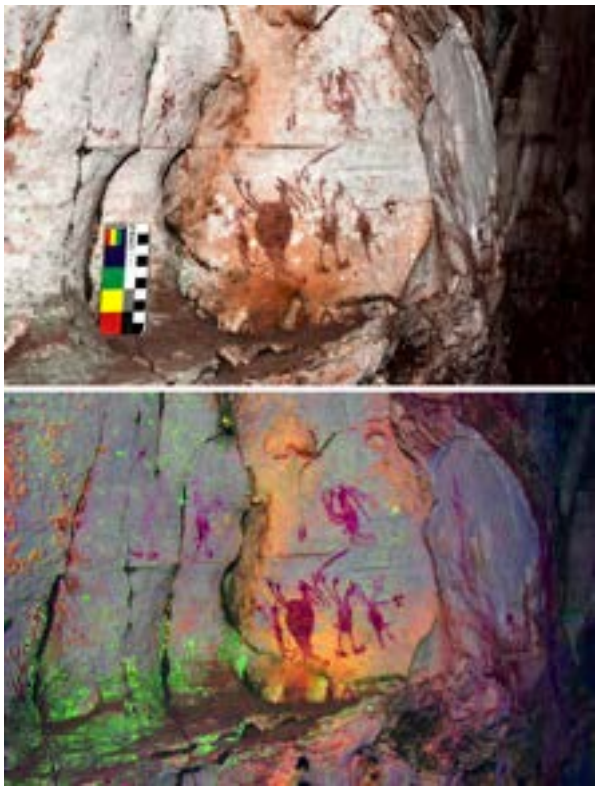

***Figure 14.*** *This almost isolated panel in a niche on the wall of Cueva Juan Miserendino displays an anthropomorphous scene of seemingly ritual performance, with a hooked stem (dart?) depicted above and between the second and third figures of the bottom quartet. Note how the arms and head gears, or hairs, seem inter-crossed as if passing behind each other, suggesting tridimensionality in the figures' spatial positioning and attributes. This particular panel holds outstanding parallelism with the Seridó sub-tradition of NET (photos and DStretch: RV, 2022–2024).*

relate to NET and other traditions and sub-traditions in northeastern Brazil continued during 2023. Members of AVCAR (Asociación de los Valles Cruceños de Arte Rupestre) Roy Querejazu Lewis, Giovanni Guidetti and Hugo Santa Cruz have continued the work in seven other sites. All of them contain concepts likely related to NET rock art. These are Quitunuquiña I (see the remarkable group of anthropomorphs in Fig. 20), El Piyo (Yororobá), Arco (Yororobá), Migración de Animales (Yororobá), El Indio (Yororobá), Quirino and San Luis I.

This last research phase has continued to provide evidence of a possible conceptual relationship with NET rock art expressions. The rock art of these seven sites maintains the same general characteristics mentioned above. Among

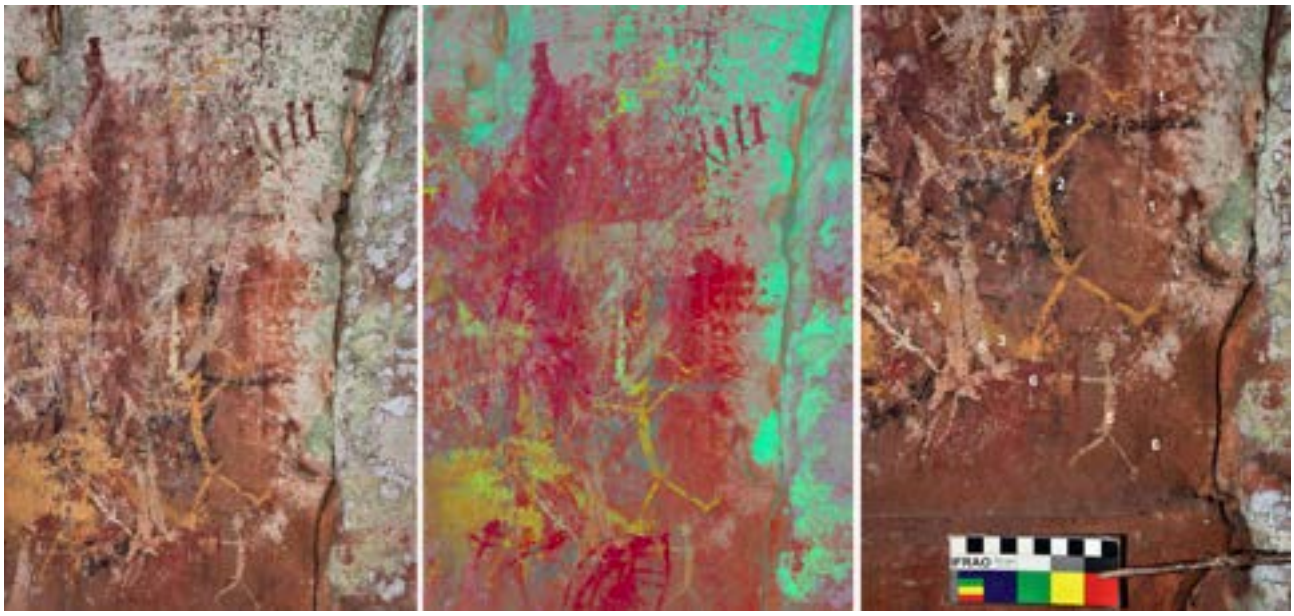

***Figure 15.*** *Cueva Juan Miserendino, from left, white light photo and DStretch (LRE filter), both by RV, 2022–2024. On the right, hypothetical chronological sequence of a minimum of six painting phases.*

***Figure 16.*** *Cueva Juan Miserendino 'hunting scene' section hypothetical chronological sequence starting with the oldest hunting scene (1) almost entirely faint, displaying a collective action engaging anthropomorphs with artefacts and zoomorphs, followed by similar anthropomorphs (2) displaying movement in a lighter red hue (not superposing former figures, only judging based on preservation state). A cross-hatched geometric motif superimposes the hunting scene and introduces a thematic disruption in the sequence as the third phase (3); on top of it, a larger anthropomorph in a darker red hue stands in profile (4); other elements may integrate the fourth phase based on colour likeness and are less secure associations (4?); then, modern graffiti (5). The crescent head attribute perdures over time in the three anthropomorphous phases, though formal differences are evident between 1 and 4 (photos and DStretch: RV, 2022–2022).*

them, the site known as 'El Índio' (Fig. 21), with a partial side anthropomorphous figure measuring 80 cm in height by 48 cm wide, because of its size, does not fit within the characteristics of the Seridó sub-tradition anthropomorphous figures and could be considered having Agreste tradition ones. Nevertheless, some of its details coincide with NET characteristics, particularly with its Seridó branch: dynamism, head with semi-lunar shape, feather-like ornament, open mouth, extended arms, legs in movement with bended knees, hands and feet with open fingers and toes, and an erect penis, now hardly visible. Likewise, it has some details that do not fit: most of all, its large size and the pronounced muscles of its legs do not coincide with the stick-like appearance of NET, especially Seridó sub-tradition painted extremities. A possible non-scientific interpretation of these characteristics would be to guess if it combines both a NET rock art influence and a local development ingredient. This, of course, is a conjecture (an opinion based on presumptive evidence). Therefore, this assumption remains to be tested, but we assume that

***Figure 17.*** *Detail of the 'hunting scene' in Cueva Juan Miserendino, barely visible due to severe weathering, here DStretch highlighted. It is likely the oldest moment of painting on this section of the site. In the frame, three anthropomophs with their seeming weapons engage with two ungulate zoomorphs. The narrativeness of this scene is straightforward, and its storytelling dimension is eloquent, as are the parallels with the Seridó sub-tradition of NET. Note that the anthropomorph at the bottom right side holds a possible dart thrower with his right hand launching the dart. The stem of the dart can be seen ahead of the thrower, stuck in the neck of the zoomorph, while with his left hand, he holds a set of three darts, one with a hook in the end. This image served as a model, allowing us to hypothesise about the peculiar morphology of those instrument depictions and their functions, as well that that iconographic pattern is recurrent on the walls of this site, including without anthropomorph association (see Fig. 18) (photo and DStretch: RV, 2022–2024).*

some NET similarities in Chiquitanía originate in a mixture of local cultural practices.

After analysing sites with possible NET rock paintings, twelve in Chiquitanía and five in the Santa Cruz valleys, we have identified rock art manifestations with similarities corresponding to Serra de Capivara style, Agreste tradition and Seridó sub-tradition.

Respectively, the mentioned seventeen rock art sites in Bolivia could have the following NET influenc-

***Figure 18.*** *Rolls of highly stylised 'anthropomorphous' figures from a posterior phase than the 'hunting scenes', but also possibly associated with NET styles in Brazil. In the middle image, the roll superposes what seems to be a hunting gear kit with darts, a dart thrower, and something like a strap bag(?). Taken together, these rolls and the later crescent-headed anthropomorphs (see Fig. 17), less dynamic and without zoomorphic interactions, indicate that not only a single NET chrono-style may occur in the site, but diverse manifestations of that tradition might be occupying that space over time, thus suggesting a complex, multifaceted and diachronic presence of the Nordeste tradition in this region. This phenomenon possibly testifies to the coevolution of NET styles with local Indigenous expressions contacted in different episodes of arrival in that area, leading to multiple hybridising processes over time, thus creating new endemic expressions. This assumption constitutes a working hypothesis that needs testing by expanding the sample of sites investigated in that area under the same focal perspective of identifying NET-relatable elements amid endemic developments (photos and DStretch: RV, 2022-2024).*

***Figure 19.*** *Details of eloquent anthropomorphous expressions in Cueva Juan Miserendino walls with attention to the articulation with seemingly hunting-related material culture depictions and zoomorphs. Top: the open-arms anthropomorph described in Figure 13, with his hunting gear as if floating near his hands (according to our contextual interpretation, near the left hand a dart, and by the right a dart thrower), takes part in a synchronic scene with other anthropomorphs and zoomorphs. Below: the large-bodied anthropomorph with open arms, surrounded by the hunting gear (note what seems to be an ornithomorph-shaped dart thrower under his right arm), and with a small zoomorph later placed on top of his trunk, connected with the sequence of animal tracks, and despite the clear diachrony between them, that same anthropomorph is seen in Figure 12 nearby faint synchronic zoomorphs, constituting another possible hunting-related interaction (photos: RV, 2022).*

***Figure 20.*** *Quitunuquina 1 site has a scene depicting a band of anthropomorphs (hunters/warriors?) on a coordinated move. Careful attention to the visual description of material culture is impressive. Four of the five figures seem to carry clubs suspended in the air but juxtaposed with their extended arms. These seeming artefacts are identical to ethnographic exemplars found among Macro-Jê linguistic family-speaking groups of the savannas in central Brazil (e.g. Kayapó). The second figure, to the right, seems to hold the club under his arm while carrying a dart thrower and a hooked dart, isomorphic to those exemplars in Cueva Juan Miserendino, indicating further iconographic relatedness between these sites in the Chiquitanía sample. The figure in the rear has what seems to be distinctive body attributes suggesting different qualities and social roles amid the group (photos: RQL, 2023/ DStretch: RV, 2022–2024).*


***Figure 21**. El Índio, Yororoba site. Large-sized anthropomorphous figure containing hybridised stylistic elements from Seridó sub-tradition and Agreste tradition, according to RQL. That would constitute a case of local innovation in the Chiquitanía sample (photo: RQL/ DStretch: RV).*

es (only the most noteworthy comments are included). In Chiquitanía: 1. Cueva Juan Miserendino: Agreste tradition, and principally, Seridó sub-tradition; 2. El Manantial: Serra da Capivara style, Agreste tradition and possibly, Seridó sub-tradition (with the depiction of a 'tree'); 3. San Luis I: Serra da Capivara style and Agreste tradition. 4. San Luis II: Agreste tradition and Seridó sub-tradition. 5. Motacú I: Agreste tradition with large geometric motifs (rows of ovals, spirals and zigzags). 6. San Silvestre: Serra da Capivara style, Agreste tradition and Seridó sub-tradition. 7. Quitunuquiña I. Serra da Capivara style, Agreste tradition and Seridó sub-tradition (with two groups of anthropomorphous figures containing the main characteristics of this style). 8. Quirino: Serra da Capivara style, Agreste tradition (with hands in positive and huge geometric designs); 9. El Piyo – Yororobá: Agreste tradition (large bird); 10. Migración de Animales – Yororobá: Agreste tradition; 11. Arco – Yororobá: Agreste tradition; 12. El Índio – Yororobá: Agreste/ Seridó sub-tradition (?) (Large anthropomorphous figure with Seridó characteristics).

In Santa Cruz valleys: 1. Cueva Las Guitarras: Serra de Capivara style ('hunting scene' with anthropomorphs, quadrupeds and spears); 2. Verdecillo: Serra da Capivara style (included two anthropomorphous figures in profile facing each other with an oval object in between), Agreste tradition. 3. Cueva Don Armando: Serra da Capivara style (characteristic quadrupeds in profile), Agreste tradition (two positive hands with curvilinear palm designs). 4. Las Lauras II: Agreste tradition. 5. Cueva del Tirino: Agreste tradition (hands in positive with a spiral on the palm. Small juvenile or female right hands).

Keeping in mind that the previous information has a preliminary and non-scientific character, it is interesting to note that in both regions (Chiquitanía and Santa Cruz valleys), a possible dominant influence seems to arise from the Agreste tradition, corresponding to a later development within the NET rock painting corpus. On the other hand, possibly much older NET influences were manifested through the Serra da Capivara style in both regions. At the same time, Seridó sub-tradition similarities are only present in the Chiquitanía region.

What has been exposed so far, with relation to a possible identification of NET rock art in southeastern Bolivia, emphasises the need for a profound, systematic, complete and well-programmed research project in Chiquitanía and the Santa Cruz valleys, which should include other cultural developments, obtaining a coherent overall chronological sequence.

Concerning the possible NET rock art affiliation with some of the rock paintings in the area of Santiago, Roboré and San José that are part of Chiquitanía, we currently have an initial and preliminary sample that requires much more investigation. The resemblances are there, and this fact needs further research and the correspondent documentation.

Nevertheless, we have a 'foundation stone' well placed. With the initial research so far, we can suggest that what we perceive in this sense in Chiquitanía and the Santa Cruz valleys originates in cultural identities in northeastern Brazil.

Respectively, we agree with Pessis et al. (2018) in the sense that during the evolution of different cultural-graphic identities, it is of primordial importance to take into account space and temporal variables, which include other variables in social and ritual practices that are manifested through time in the rock panels (ibid.: 40). As repeatedly mentioned in this subtitle, there is still no scientific evidence that NET rock art paintings are present in southeast Bolivia (Chiquitanía) and in the Santa Cruz valleys. This possible certification will be the task of future international and interdisciplinary projects. Fortunately, the raw material is there, with all the different similarities that coexist in Brazil and Bolivia.

**The Dry Diagonal Hypothesis**

Here, we outline a set of propositions to cope

with the scenario presented in the previous sections. Our main take revolves around a continental-scale network of cultural transmission of rock art knowledge between the Brazilian Northeast and Bolivian Southeast regions of South America. The delimitation of these two areas as an integrated perimeter superimposes a massive continental biogeographic corridor, constituted by a set of open and xeric interconnected biomes, denominated the *Dry Diagonal* (e.g. Vanzolini 1963; Prado and Gibbs 1993; Lima et al. 2018). We suspect that this co-occurrence is not a random fact and ancient human communities dispersed over that territory actively interacted with those environmental characteristics, maybe even coevolving with them, reshaping their cultural lives and the corridor itself over their deep and extensive historical ecologies (Baleé 1998) and cultural geographies (Sauer 1962).

Opened over most of the Pleistocene and Holocene periods, the biogeographic interconnectedness of this corridor (linking the seasonally dry tropical forests of northeastern Brazil and the Chiquitanía region, passing through the savannas of central Brazil, and extending over the Paraguayan Chaco) could have favoured particular socio-ecological transformations and familiarisation processes[4] (e.g. Fausto and Neves 2018) that may have improved conditions for long-distance displacement, extensive interaction among peoples and intercultural diachronic landscaping, mirroring previous dispersals of megafaunal, faunal and floral genera and species those human groups shared knowledge about and exchanged knowledge with since they were likely interacting as human and non-human persons and social groups, closely reciprocal from an animistic ontological perspective[5] (e.g.

***Figure 22.*** *Long-legged ornithomorphic representations of seeming flocks of* Rhea americana *(piyos, nãndus or emas). Top: El Manantial site, Chiquitanía, Bolivia. Bottom: Mirador de Parelhas site, Seridó, Brazil (photos: RV and JS, 2022–2023; DStretch: JS, 2023).*

4 In short, familiarisation refers to *making kin out of others* (Vilaça 2002; *apud* Fausto and Neves 2018). In South American ethnology, that has been described as a widespread and ancient process of incorporating the otherness within familiarity ties, appropriating the difference in the self. Commonly, it applies in the context of the relationship between humans and pets (non-domesticated animals converted as relatives) in Amerindian societies. More recently, the relationship with plants as a theoretical substitute for the concept of domestication has been proposed (Fausto and Neves 2018). The same conceptual framework could apply to whole landscapes or topo-ontological territories (Challis and Skinner 2021: 20) navigated over diasporic processes. That is, social, symbolic and ontological processes of incorporating strange or new landscapes into a kinship system of relatedness with the land based on recognisable indexes of likeness with known ecological phenomena, for example, vegetation patterns, animal species or geomorphological features.

5 In that sense, it is noteworthy to observe that the zoomorphic occurrences are not associated only with hunting-relatable contexts but also come in zoomorphic presences without synchronicity or co-occurrence with the anthropomorphous component. In those cases, the ethno-ethological and ontological realms seem to conflate, occupying the conceptual nexus of those graphic contexts. The depictions of flocks of *Rhea americana(?)* in both compared areas seem especially inviting to allude to the symbolic and social importance of ontological familiarisation with certain faunal species occurring

Viveiros de Castro 1998). The archaeological indicators of those long-distance navigational processes should be detectable over the Dry Diagonal. Therefore, we reassess a continental (co)dispersal of NET conceptual traits within this biogeographic and ecological framework tempered with ontological spice.

We begin focusing on the pictograms of the Cueva Juan Miserendino site that bears particularly compelling evidence in the Chiquitanía region, coupled with a dated archaeological context plausibly relatable to the paintings. Showing at least six superimposed pictorial phases (Fig. 15), importantly comprised of dynamic anthropomorphous and zoomorphic figures, with a seemingly lesser occurrence of abstract motifs, they suggest a persuasive correlation with some features of NET anthropomorphism and synchronic scenography, particularly with Seridó sub-tradition, opening space to conjecture on a comparative level. Thus, an initial aspect to consider is the age estimation of those rock art corpora examined.

*NET dates*

Recently excavated archaeological evidence from Cueva Juan Miserendino (Drakic 2022a[6] and 2022b) corroborates an Early Holocene age for its occupation, with significative controlled fire activity within the cave, radiocarbon-dated between 8500 years BP and 6400 years BP (9400 cal. years BP and 7200 cal. years BP, respectively). Despite the excavation work, so far, not providing secure relationships between the paintings and the dated layers, there are contextual indicators (e.g. ochre samples and stone tools stained with pigment) for associating the production and use of ochre pigment on the site with the later date. As mentioned, the parallels with Nordeste tradition pictograms are compelling enough to make the observer wonder what caused those similarities or what connections might be between these geographically distant and noticeably alike bodies of rock art.

NET research in northeastern Brazil (e.g. Guidon 1984, 1989; Pessis 1987, 1989, 1992; Asón and Martin 2000; Guidon and Martin 2010; Pessis et al. 2018[7]) established a timespan comprising 6000 years for its cultural production, starting at about 12,000 BP and ending around 6000 BP (but see Morales Jr 2005). However, recently, A.-M. Pessis and G. Martin (2020: 22) have cautionary stated that the circumstances where rock art can be dated are rare, as is the case when an archaeological stratigraphy provides a relative dating to rock paintings. Then, they conclude: '(...) to this date, there is no absolute dating to the prehistoric rock paintings of northeastern Brazil (…).' Therefore, the lifespan regularly attributed to the NET is an estimation based on indirect dating means[8] (e.g. stratigraphically buried panels, painted rock fragments detached from the wall and deposited in the stratigraphy). Notwithstanding, these are the data available as a chronological frame of reference for those rock art expressions on their probable place of origin. Therefore, all efforts to bracket in time possibly related phenomena elsewhere in South America should crucially consider that information despite its limitations.

The Seridó sub-tradition of NET occurs between the States of Paraíba and Rio Grande do Norte, 800 kilometres further east of southeastern Piauí State. The initial configuration of this phenomenon is indirectly estimated at around 9000 years BP (Pessis and Martin, 2020). That estimation is based, among other things, on the contextual correlation with two secondary burials found in the Mirador de Parelhas and Pedra do Alexandre sites, NET painted rockshelters, both contexts radiocarbon dated in 9400 years BP. The Mirador de Parelhas is one of the most expressive and characteristic sites of this sub-tradition and, given the location of its dated burial in a richly painted niche right above the grave ('the chapel'), G. Martin (1985) initially inferred a possible relationship between that funerary context and the pictograms, conjecturally considering the spatial proximity as an index for a chronological association, but acknowledging the procedure as insufficient to secure a confident age for rock paintings, she then stated: 'The recovered remains cannot be related to the paintings; just that, as we stated before,

throughout the entire Dry Diagonal.

6 On 16th February 2022 (and in a later communication), a public statement and report from the Gobernación de Santa Cruz archaeologist, Danilo Drakic, brought to light the preliminary unpublished excavation results in the Cueva Juan Miserendino site. Accordingly, two interesting radiocarbon dates provided by the Beta Analytics Laboratory, USA, were obtained. The earlier result was 8490 ± 30 years BP (Beta - 611384), and the latter was 6419 ± 30 years BP (Beta - 611383) for charcoal samples from different levels of a thick stratigraphic deposit containing a deep accumulation of hearth remains and charred materials. The calibrated measurement of these samples resulted in 9535 and 9423 cal. years BP for the deeper one and 7422 and 7280 cal. years BP for the younger one. Most importantly, a lithic tool used as a grinder in red ochre pigment preparation, reducing haematite into powder, was found within the 6400-year BP level. So far, that evidence is the best shot to connect indirectly a radiocarbon date with the production/use of the same type of pigment used in the production of rock paintings at the site. Sources: Prensa Gobernación de Santa Cruz - *https://www.youtube.com/watch?v=Ae0ShP6Fc_o*; and Biblioteca Departamental de Santa Cruz - *https://www.youtube.com/watch?v=RIJsjZQN5-4*.

7 Pessis and collaborators mentioned a date of 15,000 years BP instead of the usually attributed 12,000 years BP for the NET origin, extending back its ontogeny 3000 years. However, the referred article provides no further information on that. If confirmed, it will substantially change our knowledge of NET ethnogenesis.

8 Archaeometric dating techniques, such as U/Th series, TL and EPR, were applied to some samples from that area. However, some of these results were disputable, or their relation with NET expressions remains unclear (e.g. Watanabe et al. 2003; Rowe and Steelman 2003; Fontugne et al. 2013; Rosina et al. 2022).

they signalled a posterior occupation' (Martin 1985: 82 [transl. RV]). Therefore, the paintings could be even older than the 9000 BP threshold. In any case, that is a significative chronological approximation for the Seridó sub-tradition.

Among the similarities between the anthropomorphs of the Cueva Juan Miserendino site and those of the Seridó area, the cephalic feature in a crescent shape resembling a cashew nut, as if their mouths were wide open, stands out. Other comparable attributes are also present in Miserendino and other sites nearby, like 'scenes' of small-sized anthropomorphs performing different actions, holding objects, interacting with zoomorphs, hunting scenes (Fig. 17), or linear groupings of zoomorphs like seemingly *Rhea americana* flock representations, always bearing a distinctive narrative character. Noteworthy, the anthropomorphous head morphology associated with Seridó sub-tradition and other comparable attributes reported from sites in the Chapada Diamantina region, Bahia state (Etchevarne 2009), Minas Gerais state (e.g. Prous 1991; Martin 1997), and even in the Chiribiquete, Colombia (Castaño-Uribe 2019[9]), seems to indicate a broader and more complex dispersion process than previously suspected.

Once agreed that these are NET-related phenomena, a parsimonious way to address that problem is by hypothesising a continental-scale dispersion of that cultural horizon, from northeast to southwest in South America during the Early and Middle Holocene, between 11,000 years and 7000 years BP. That would imply that the Nordeste tradition expression in southeast Bolivia, despite idiosyncratic and coevolving with diverse cultural contexts from older and parallel occupation processes bearing independent local developments, is a derivative phenomenon, postdating and enrooted in those from northeastern Brazil. Furthermore, the age estimation of both NET contexts analysed here is coherent with a Late Pleistocene expression of that tradition in Piauí, an Early Holocene presence in Rio Grande do Norte, and then a Middle Holocene occurrence in the Chiquitanía region.

*Biogeography and palaeoenvironment*

After considering the age estimation issue and the coherence of the available data, building up that hypothetical scenario demands adding biogeographic and palaeoenvironmental data as an embedding context. Therefore, we need to ask where those communities were before their farther displacements took place, setting them in motion over wider distances, and what the environment and climate were like in those early millennia of NET ethnogenesis. According to some sources (e.g. De Oliveira et al. 1999; Behling et al. 2000; Ledru et al. 2002), between 15,500 and 10,500 years BP, different parts of the semiarid hinterlands of the Brazilian northeast experienced a wetter climate, dominated by tropical rainforest-like environments, similar to those found in Amazonia and in the Atlantic rainforest, possibly forming contiguous ecological corridors connecting both biomes. So, it is a fair assumption that before 12,000 years BP, proto-NET communities started configuring their historical-ecological trajectories within wetter environments than those that predominated over most of the Holocene, characterised by xerophytic and deciduous caatinga shrub forests (Santos and Santos 2008; Prado 2003). However, this humid gap in the NET early formative ended pretty soon if we consider its lifespan of 6000 years, most of which those communities have likely been interacting and developing sophisticated knowledge to deal with much drier environments.

That climatic change towards dryer conditions affected extensive ecological zones where those proto-NET communities settled during the Late Pleistocene. It likely caused the retraction of dense humid tropical forests and re-expansion and fixation of open and xeric vegetation physiognomies, constituted by seasonally dry tropical forests (SDTFs), such as the caatinga biome, besides savannas and grassland. Hence, the Dry Diagonal was restored to its overall plenitude around 11,000 BP (for a historical review, see Lima et al. 2018). Dominant over most Pleistocene and Holocene periods, the Dry Diagonal translates the interconnectedness among caatinga dry forests, Cerrado (savanna vegetation), Chiquitano dry forests and Chaco biomes. Commonly perceived in biogeographical studies as a massive ecological barrier separating Amazonia and Atlantic forests (e.g. Prado and Gibbs, 1993; Peres et al. 2020), lastly bridged during the mentioned short wet interval in the Late Pleistocene, here we emphasise the opposite perspective and explore the Dry Diagonal as a massive socioenvironmental corridor for plant and animal genera and species, including human communities developing cultural adaptations/familiarisations to manage, reciprocate and coevolve with those dry and open ecosystems, socially learning from them as sentient cultural agents. NET communities would have begun their continental diaspora, taking cultural-cognitive advantage of that fully interconnected and sentient corridor from 11,000 BP onward.

Pessis and Martin (2020: 26) affirm that the diasporic movement of Nordeste tradition groups out of their original territory started from 9000 BP onward. Their assessment is reasonable, assuming NET com-

9 According to that author: '[...] Possibly, these dates [referring to very early dates for human occupation in that area] are connected with the chronology proposed in Brazil for the Nordeste tradition, particularly with the Seridó sub-tradition, which is intimately associated with the typological and stylistic manifestations of the early stylistic phase of Chiribiquete' (Castaño-Uribe 2019: 79 [transl. ours]). The Chiribiquete data is relevant regarding the problem of a NET continental scale diaspora. Although our hypothesis design targets the Bolivian case, we understand that a more comprehensive approach to that problem should involve a network of Brazilian, Bolivian and Colombian studies.

munities dispersed after the onset of a wider dryness. In that regard, their proposed diaspora relates to a socially disruptive climatic change that generalised around 9000 BP. Although a complete palaeoenvironmental scenario for that region and time frame is missing (see Araújo et al. 2005: 298), fragmentary available evidence indicates that dryness was already dominant around 11,000 BP. Accordingly, in the coastal area of Ceará state, humid tropical forests predominated between 15,500 and 11,800 BP, as indicated by the study of Behling and colleagues (2000). They analysed the palynological content of a column of marine sediments collected off that coast, enriched with fluvial deposition, covering the last 42,000 years, showing that before and after that short tropical humid interval of 4300 years at the very end of the Pleistocene, a semiarid environment dominated the whole sediment sequence. A similar scenario emerged in the northeastern Maranhão state from 14,000 to 11,000 BP, after which an abrupt change towards dryness dominates that palynological record (Ledru et al. 2002: 276). In the middle São Francisco River basin, Bahia state, a similar situation, but in a much shorter interval, occurs with Amazonian-like humid tropical forest recorded between 10,900 BP and 10,500 BP, alternating in the aftermath to gallery forest, savanna and drier formations over the Holocene (De Oliveira et al. 1999: 323). On average, at 11,000 years BP, the socioenvironmental triggers for broader dispersions were in place. By then, people would be moving, not because dryness became unsurmountable, but because the necessary ecological knowledge and skills were already in place to fully explore the expanded availability of seasonally dry and open landscapes in the Dry Diagonal.

*NET ethnoecology*

Considering the chronometry for the Nordeste tradition so far available (cf. Pessis et al. 2018: 42), then the absolute majority of its lifespan, approximately 5000 years of its cultural process of transmission and reinvention, very likely involved several multidirectional dispersive events throughout the Dry Diagonal interconnected biomes. That is the basic assumption we are resorting to understand how, possibly at around 8500/6400 years BP, groups of people bearing consistent elements of the sociographic identity of NET entered today's southeastern Bolivia territory and painted on the Cueva Juan Miserendino walls and in other nearby places. We think they were travelling through the landscapes of their mnemonic familiarity (recognising plants, animals, rocks, winds, clouds and terrain features and effectively predicting ways of acquiring water), embedded in their dreams, myths, stories and traditional ecological knowledge (TEK; e.g. Berkes 2008).

Traditional ecological knowledge is crucial in our assessment. It can be defined as 'the cumulative body of knowledge, practice, and belief, evolving by adaptive processes and handed down in generations by cultural transmission, about relationships of living beings (including humans) with one another and with their environment' (Berkes et al. 2000, *apud* Martin et al. 2010: 840). Therefore, TEK guided NET-bearer communities in their continental dispersal through the Dry Diagonal without necessarily implying avoidance of humid zones with dense forestry formations. Seemingly coincidental evidence, however, suggests the most consistent reoccurrence of NET sites inside the Dry Diagonal continental perimeter so far. Then, a first conjectural step is to question the random nature of this co-occurrence; that is, can we demonstrate that this correlation is more than fortuitous and that a causation relationship may be articulating NET within the Dry Diagonal?

Increased water availability would have favoured more humid ecosystems as displacement routes. Nevertheless, if solely estimated based on a water presence-absence algorithm, a thorough understanding of the factors guiding the establishment of broad cultural-geographic routes would miss the complexity of socio-ecological articulated factors acting upon human groups mobility and landscape familiarity (e.g. Rockman and Steele 2003; Kelly 2003). Environmental strangeness has a debatable nature as conspicuously imposing upon migrant people new harsh adaptive challenges as if constantly breaking in new leather boots. Complementarily, familiarisation processes are less deterministic and more flexible than adaptive ones; they are also multidirectional and readily open to shifting situations, thus permanently flowing. So, unfamiliarity does not preclude knowability; it enables knowing, thus fostering TEK. Moreover, the lack of physical presence does not prevent mnemonic awareness of the landscape learned from orality. Therefore, becoming familiar with the landscape can be socially constructed through intergenerational storytelling and ritual, even without being bodily there (e.g. Tenório Tuyuka et al. 2022).

Complex socio-ecological articulations are what TEK stands for. Accordingly, it sustains that: 'A view of humans as embedded within ecosystems avoids framing the human–environment relationship as a dichotomy, thereby indicating a lack of separation between a non-human nature and human culture (...)' (Martin et al. 2010: 842). Furthermore, ecological knowledge building is crucially dependent upon situated experience. In that sense: '(…) experience, which is obtained in specific locations, is the basis of local science (...) TEK is, therefore, "situated knowledge (...) and characterised by a view of ecosystems from within. New knowledge is continuously created through a "conversation" with the local ecosystem (...)' (ibid.: 843).

Such principles of traditional ecological knowledge are not reducible to a checklist of variables human groups must match, like the easiness of water availability, to move from place to place. On the other hand, reciprocity between humans, non-humans, and

landscape, at the base of environmental familiarity processes, would help explain why open and seasonally dry environments instead of humid forests were preferable pathways for those groups. Although open environments can be conducive to enhanced accessibility, SDTFs (seasonally dry tropical forests) were also familiar and predictable to the TEK processes carried out by NET communities over millennia of socio-environmental coevolution within the Dry Diagonal.

Thus, complex environmental affordances and reciprocities with human memory, knowledge, agency and technology guided the navigation process through the SDTFs and savannahs up to Chiquitanía. For 5000 years, SDTFs and savannahs became the most persistent settings for NET communities' cultural landscaping and historical ecology. Indeed, seasonally dry and open landscapes were the threads with which Nordeste tradition practitioners weaved their socio-environmental identities. Therefore, their dispersion over the Dry Diagonal cannot be measured (i.e. limited) by the scarcity of hydric resources; on the contrary, it was very sophisticated skills to obtain and manage the water available on a multitude of knowledge-predictable sources that afforded their expansion through a seemingly desolated Early Holocene dryness. NET communities were everything but drought refugees, victims of hydric scarcity. Instead, they coevolved with semiarid environments, living a reciprocal co-existence with seasonally dry ecosystems.

NET sociographic identities seemed to be moving through places ecologically and symbolically familiar to their primordial landscapes, carrying their territory inside their minds and, as graphic memory, transferring it to new rock outcrops and shelters by painting over their routes of displacement. Therefore, such places performed active roles in their navigation process (i.e. travelling through space and history while making sense of themselves amid socio-environmental and ontological differences), which required negotiation and incorporation of novel landscapes and their multiple inhabitants, translating them into other states of kinship, attained through painting the other to the self, and the self to the other, conversely. Hence, painting may have consisted of negotiating with socio-environmental differences, a process where not only their historical-ecological knowledge was calibrated to solve similar survival problems with a sophisticated management of natural resources seasonally available on a relatively predictable basis but also profoundly inserted in a cosmopolitical network (e.g. Stengers 2018) of inter-familiarised subjective othernesses. Over the millennia, it has structured landscapes of memory, ritual and myth—their mythscapes (e.g. Bell 2003). Thus, the Dry Diagonal can be posited as an extensive living web of NET mythscapes.

Therefore, preferably expanding through seasonally dry and open ecosystems and sharing a way of 'graphicalising' (O'Hanlon 1995) their historical perspectives on the environment as a cognitive strategy for landscape familiarisation (but see landscape domestication in Erickson 2008[10]) and cosmopolitical navigation, NET communities may have started their continental dispersal after 11,000 BP, reaching the Chiquitanía around 8000 to 6000 BP.

**How could this be tested?**

From the caatinga shrub forests in the extreme northeast of the formation to the SDTFs of the Bolivian Chiquitanía and Gran Chaco in the extreme southwest, Nordeste tradition sites should be present. Therefore, the occurrence of NET in the Cerrado biome (central Brazil savannas) becomes a crucial piece of the puzzle and would significantly support the Dry Diagonal hypothesis. Conversely, its absence would contribute to refute or diminish the proposal's probability.

Favouring the former scenario, some fragmentary evidence reported since at least the mid-80s from the Cerrado area seems to back up the Dry Diagonal proposal. Accordingly, a cluster of NET sites occurs in central-to-southwestern Brazil, encompassing the municipalities of Caiapônia de Goiás (Schmitz et al. 1986; Solá 1994), Palestina de Goiás (Procópio and Viana 2021[11]), both in southwestern Goiás state, plus a

10 'Domestication of landscape implies all intentional and non-intentional practices and activities of humans that transform the environment into a productive landscape for humans and other species. Domesticated landscapes are the result of careful resource creation and management with implications for the diversity, distribution, and availability of species' (Erickson 2008: 158). Sustaining that rock art is part of such a process means the graphic encoding of ethnoecological knowledge on rock surfaces, expressing a cognitive dimension of the domestication process or landscaping with images. However, as mentioned, we prefer the familiarisation alternative (Fausto and Neves, 2018), deemed more fine-tuned to the subtleties of Amerindian instances of negotiating the difference over inter-ontological navigation processes within newly occupied landscapes, where rock art is involved in making the environment more 'productive' not necessarily to humans, animals or plants on a Western ecological sense, but on a more cognitively inviting and pleasing place to spirits, mythic ancestors, and other-than-human persons, hence ontologically safer for humans themselves. A process we could associate with the idea of cosmopolitical navigation.

11 These authors are not particularly concerned with the Nordeste tradition in their article about the site GO-CP-33. However, zoomorphic and anthropomorphous motifs shown in Figures 11 and 18 of that work share the same attributes used to define NET in other parts of Brazil and are also present in the neighbouring municipality of Caiapônia de Goiás (e.g. Solá 1994). Figure 18 (Procópio and Viana 2021: 21), partially reproduced here (Fig. 24), is particularly evocative because it portrays a group of about 15 anthropomorphs walking in line through a path, following a route, two seemingly carrying a hunted game. From the visual cues available, that is a scene narrating a group of people on the move, performing the action of dislocating through space-time. Noteworthy, Palestina de Goiás is situated 870 km NE of Santiago de Chiquitos, the

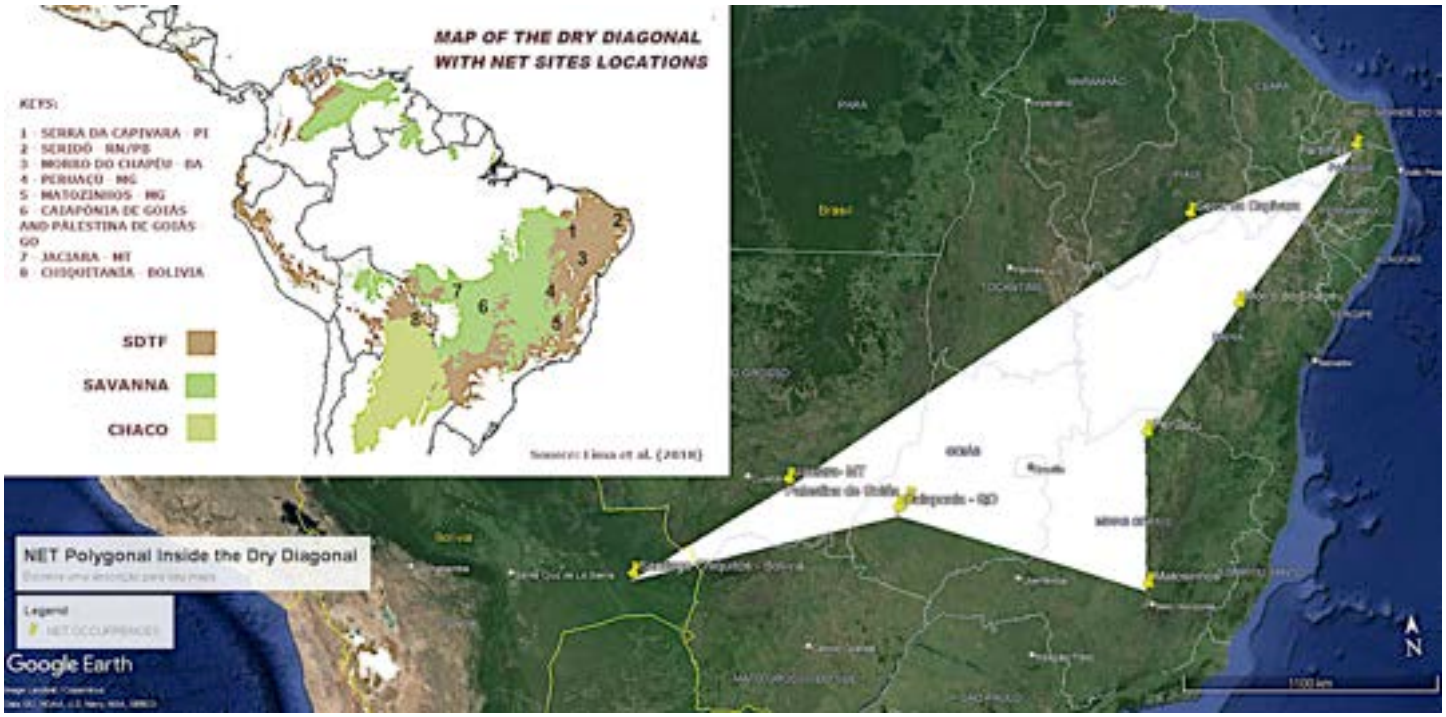


***Figure 23.*** *Map of NET site clusters and occurrences over the Dry Diagonal. Underlying image: satellite image of South America showing the localities in Brazil and Bolivia of the mentioned sites, demarcating a preliminary polygon with likely potential for further NET occurrences. Top left: the biogeographic map with the schematic distribution of the Dry Diagonal biomes with NET hotspots in black numbers. Sources: Google Earth and adaptation from Lima et al. (2018).*

third occurrence in the Toca do Parto site, Jaciara municipality, São Lourenço River basin, in central-southern Mato Grosso state (Martin and Asón 2000; Martin 2008: 270). Despite fragmentary, when collectively signalled on the map, this information clairvoyantly shows a preliminary geographic dispersion pattern (Fig. 23), with plausible hotspots to look for the NET sociographic concept, forming a territorial polygonal inside Brazil, comprising most of Northeast region and parts of Minas Gerais, Tocantins, Goiás, Mato Grosso, and Mato Grosso do Sul states, and out of Brazil by southeastern Bolivia and northern Paraguay. This territorial delimitation, thus far, comprises our hypothesis testing ground in its spatial dimension.

Those rock art investigations in the Cerrado of central Brazil seem to converge in the interpretation that the evidence found, especially in the Goiás state, presents a mixture of stylistic traits, suggesting that Nordeste elements hybridised with other horizons, such as Planalto tradition of rock paintings (Schmitz et al. 1986, *apud* Solá 1994; Procópio and Viana 2021: 5). As pointed out before, the Agreste tradition (Martin 1997), another significative rock art tradition from the Brazilian northeast region, would also be intermeshed in this Dry Diagonal mosaic of graphic identities (as indicated by one of the *RAR* anonymous referees, as well as by RQL), thus emphasising an archaeological melting pot nature of those central Savannas, or a zone of intense cultural convergence and blending over the Holocene.

However, what initially seems a layout of stylistic mixing may result from a diachronic palimpsest of different rock art phases accumulated over time. That may not be the case, but judging from what we have seen in Bolivia, several graphic moments overlap in the same panels, with NET elements often occupying the base of the sequence. El Índio, in the Yororoba site, seems to be an exception, pointing to a peculiar stylistic hybridisation between Nordeste and Agreste anthropomorphous features besides local innovation (see Fig. 21).

In any case, while in the Goiás state, it is safer to assume a NET presence (as strongly suggested by the elements presented in Fig. 24), the same is not equally valid for the occurrence in the Mato Grosso state (Toca do Parto site) because no visual evidence of its graphic elements was published, nor a source for the information; the reference in Martin (1997; 2008) is a written citation only and therefore, still needs data-gathering on terrain to be fully supported.

Our take on that diasporic process also carries chronological implications, connecting it with a well-evidenced and reasonably dated environmental and climatological stabilisation of the open and xeric interconnected biomes epitomised by the Dry Diagonal after 11,000 BP. Consequently, the dispersive movement must post-date that threshold and pre-date the latest plausible index recorded in Miserendino deposits at 6400 BP. Logically, all the other NET sites

core of the sampled area in Bolivia.

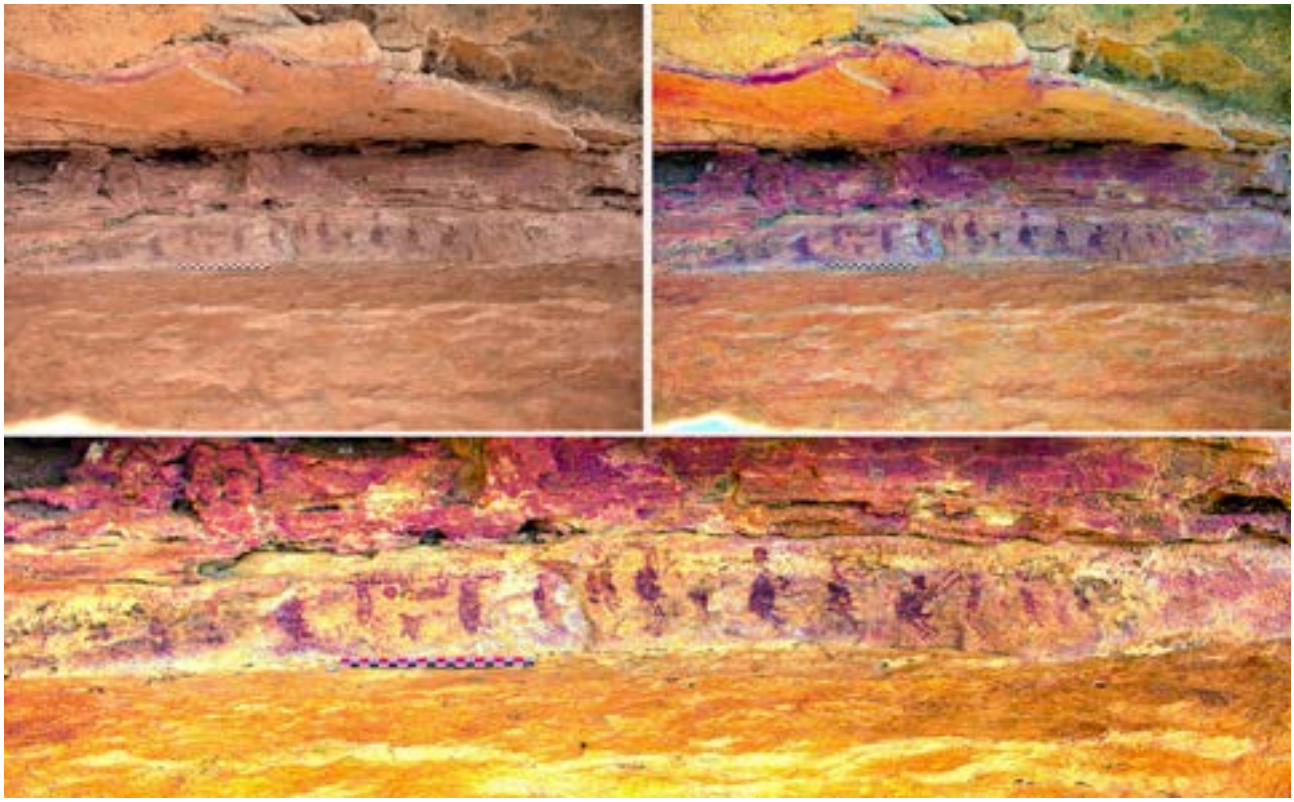

***Figure 24.*** *Net panel in GO-CP-33 site, Palestina de Goiás, Goiás State, Brazil. A group of approximately 15 anthropomorphous figures moving in line as if walking through a trail, two seemingly carrying a hunted game, also somewhat anthropomorphous, hung on a stem (photo: Grazieli Procópio, 2020–2021 [first published in Procópio and Viana 2021]; DStretch: RV, 2024).*

along the way would fall somewhere inside that interval of 4600 years. This prediction is also testable since archaeology provides rock art-relatable dates for those NET-painted sites in the in-between area of the Dry Diagonal: the Cerrado/Savanna biome. The dates in the source area must be older than in the derivative ones, and as one goes further southwest over the Dry Diagonal, one might get closer to the mid-Holocene threshold. However, two problems jumble that expectation: (1) difficulty in providing and even lack of reliable chronometric association between rock art styles and dated archaeological deposits; and (2) that it is not a unilinear or uniform evolutive process, and different branches may have parallel or later developments, as seems to be the case with the NET expressions in Minas Gerais (e.g. Prous and Ribeiro 2005) and Bahia states (Morales Jr 2005), both associated with a Mid-to-Late Holocene period.

Another disputed aspect has to do with the actual dispersive process. If the diaspora of NET concepts was a direct process (through imitation involving migration of peoples), indirect (through emulation disregarding linguistic-historical continuity), or probably an intermesh of both dynamics. Accordingly, 'the material ways of the dispersion of these ideas are yet hypothetical, we take into account the principle that ideas spread faster than people themselves, and we consider as ideas the whole context of myths, beliefs, resources and techniques that followed humans in their cultural diaspora' (Pessis and Martin 2020: 44 [transl. RV]). Whether the way NET elements ended up in Bolivia resulted from direct cultural transmission through imitation, that is, social learning with a thorough understanding of the cultural causality process, thus reproducing the same concept, intention and overall meaningfulness, or from emulation, that is, copying the external result perceivable without cultural awareness of their original context (e.g. Tomasello 1999), these sociographic ideas travelled through a network of familiarised landscapes. Therefore, in this scenario, traditional continuity coupled with stylistic and thematic change was not mainly caused or affected by a geographic detachment and isolation from a matrix core but by social interaction with diverse humans and other-than-human cultural agents such as the landscape itself, constantly appropriated through cosmopolitical navigation-negotiation process.

Thus, we hypothesise that the Dry Diagonal was the territory of expanded conviviality and an important intracontinental route for multiple dispersive waves of the sociographic concept, or *ethos*, of the Nordeste tradition during the Early and Middle Holocene. Nevertheless, archaeology has demonstrated that diverse rock art phenomena occur throughout that ecological corridor (e.g. Schmitz et al. 1986; Prous 1991). Therefore, the NET expansion process would

not be happening over socio-environmentally void spaces as sole and pioneering occupants of the Dry Diagonal. However, as its diagnostic traits are among the most studied, well-evidenced and consensualised in Brazilian rock art archaeology, they provide favourable conditions for tracking its attributes over that vast territory, leading to the understanding that some sociographic *ethea* may be travelling thousands of kilometres over South America, facts already demonstrated by Amerindian linguistic phenomena.

Eventually, future investigations may demonstrate the existence of a NET sub-tradition and related styles coevolving in the Chiquitanía region with other rock art phenomena, even assuming a predominance of the melting pot scenario. Nevertheless, we face a critical sampling bias at this stage, affecting our perception of NET presences in Chiquitanía and central Brazil. Therefore, available sampling needs to be expanded, filling those gaps and thoroughly verifying its particular attributes, local evolutions and how they may converge and diverge from the already defined branches of the Nordeste horizon.

In this case, much further work is necessary through intensifying concerted plurinational research, inviting the collaborative involvement of Brazilian investigators who are more familiar than the authors of this article with the core attributes of NET sociographic expressions, to exchange experiences with Bolivian investigators and vice-versa, as well as, at the methodological level, through applying more sophisticated and less biased approaches to test the actual levels of formal similarity or divergence among samples, for instance, using machine learning/AI-applied typological tools to deepen the comparative analysis (e.g. Horn et al. 2022).

So far, our model has internal coherence, sensible adherence to rock art stylistic and chronometric available data, and reasonable convergence with environmental-related variables. Therefore, further testing and verification should address prospective efforts in the indicated hotspots and neighbouring areas. Despite tackling an already known subject to regional rock art studies, we are revisiting the topic, approaching it through a refreshing contextual framework articulating elements of biogeography, palaeoenvironment, ethnoecology, historical ecology and Indigenous ontology within archaeology to verify a diasporic tendency observed through a NET sociographic signature following the Dry Diagonal over its continental extension.

Tracking previously echoed voices, we understand that the Nordeste tradition is a large-scale Indigenous network of knowledge transmission (e.g. Zubieta 2022), acting as early strategies for landscape cognitive domestication/familiarisation processes. Finally, more than presenting a definitive answer that we cannot satisfactorily provide with the available data, we hope to furnish enough fuel to reignite the debate on the still poorly understood problem of continental-scale rock art diasporas in South America.

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***Post-Scriptum:*** The Seridó ecological region in the Rio Grande do Norte state, Brazil, is threatened by poorly regulated implementation of massive wind power farms on an industrial scale (Fig. 25). This ongoing process menaces the well-being of local communities, environment and archaeological heritage, particularly rock art sites, among them the Seridó sub-tradition sites of NET that hold crucial evidence supporting ancient diasporic processes relevant to understanding whole South American deep Indigenous history. This article also aims to raise international awareness of that threat. For more information in Portuguese, visit the NGO Seridó Vivo Instagram page: *https://www.instagram.com/seridovivo/*; in English: *https://news.mongabay.com/2023/09/in-brazil-rural-communities-are-caught-in-the-eye-of-the-wind-farm-storm/*

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***Figure 25.*** *Massive wind power farm near the Mirador de Parelhas site, Seridó region, Rio Grande do Norte, Brazil (JS, 2023).*

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