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# Participant experiences of icaros (Amazonian curative songs) during a traditional medicine ceremony at the Takiwasi Center, Peru

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## ABSTRACT

Musico-healing practices play a key role in indigenous and mestizo traditional medicine in the Amazon. The curative songs or *icaros* used by the *curanderos* (traditional healers) of the Peruvian Upper Amazon are administered alongside the psychoactive plant decoction *ayahuasca* in ritual settings. This Interpretive Phenomenological Analysis examines musical experiences of 6 participants attending an *ayahuasca* ritual for personal and spiritual development at the Takiwasi Center in Peru in 2018. Findings offer pointers towards a neurophenomenology of musico-healing experiences with *ayahuasca*, suggesting that the conjunction of *icaros* and *ayahuasca* may contribute to psycho-neurobiological mechanisms of healing such as self-referential processing, decentering, and facilitating access to beneficial introspective/meditative states. The study offers a medical ethnomusicological contribution to the phenomenological mapping of musico-healing experiences of Amazonian curative songs under the altered state of consciousness (ASC) produced by *ayahuasca*.

## KEYWORDS

Icaros, vegetalismo, ayahuasca, ASCs, Takiwasi, phenomenology

## INTRODUCTION

Central to treatment in forms of traditional medicine practiced in the Peruvian Upper Amazon is a type of song or magical melody called *icaro* (Demange, 2002; Labate, 2014; Luna, 1984, 1986). The name is used throughout the Peruvian lowlands (Brabec de Mori, 2020, p. 95); it is particularly associated with the form of traditional Amazonian medicine (TAM) known as *mestizo curanderismo* or *vegetalismo*, and with the Shipibo (Rittner, 2007). Other populations in the Amazon refer to related types of magical songs by different names; the Kukama of Ucayali refer to them as *mariri* (Brabec de Mori, 2020, p. 95), the Shuar of Ecuador call them *anent* (de Rodríguez, 2015), and the name *takina* is used by Ecuadorean Kichwa (Callicott, 2020, p. 365). The noun 'icaro' is commonly thought to be derived 'from the Quichua verb 'ikaray', which means 'to blow smoke' in order to heal' (Luna, 1992, p. 233), although Brabec de Mori argues that it comes from the Kukama *ikara*, meaning song (Brabec de Mori, 2020, p. 95).

In *vegetalismo*, practitioners 'combine the use of medicinal plants, icaros, tobacco blowing, sucking out of sickness, and often massage, baths, diets, and other healing techniques' (Bustos, 2008 p. 17).

Floral baths, tobacco blowing (*soplada*) and purgative rituals for cleansing the body (*purga*) may be accompanied by icaros, sung or sometimes whistled (Bustos, 2006; Katz & Dobkin de Rios, 1971). Several plant species which play prominent roles in *vegetalismo* are understood to be able to instruct disciples in the art of healing (Jauregui, Clavo, Jovel, &

Pardo-De-Santayana, 2011). Species such as mapacho tobacco (*Nicotina rustica*), toé (*Datura innoxia*), camalonga (*Strychnos* Sp.) (Jauregui et al., 2011, p. 743) bobinzana (*Calliandra angustifolia*), and chiric sanango (*Brunfelsia grandiflora* D. Don) (*ibid*, p. 744) are considered as teacher plants. Also referred to as master plants (*plantas maestras*) or *doctores*, the concept of plants as teachers is ‘widely dispersed’ throughout the Amazon (Jauregui et al., 2011, p. 740). The psychoactive admixture ayahuasca, usually a botanical decoction obtained from the vine *Banisteriopsis caapi* (Spruce ex Griseb.) Morton (Malpighiaceae) and, most commonly, the leaves of chacruna - *Psychotria viridis* Ruiz & Pav. (Rubiaceae), is the most renowned of these; central to traditional medicine for indigenous and mestizo populations across the Amazon (Jauregui et al., 2011).

Giove (2022, p. 26) notes that icaros are used to call upon plant spirits and ‘benevolent spiritual beings’ to join ayahuasca sessions, where the songs are experienced under an altered state of consciousness (ASC) induced by psychoactive botanical compounds in the brew. Icaros are central to the vegetalista aetiology of healing; singing of icaros is ‘linked to the shaman’s blowing of breath or tobacco smoke’ (Britt, 2023, p. 13), in keeping with a common Amazonian indigenous belief that the breath represents ‘life force or spiritual power’ (Graham, Saucedo, & Politi, 2023, p. 8), which may be ‘augmented with smoke or musical pitch to effect healing’ (Hill and Chaumeil, 2011, as cited in Graham et al., 2023, p. 8). In addition to their use in curing, icaros may serve the purposes of modifying the intensity, colours, and ‘directing the emotional content’ of ayahuasca visions (Luna, 2006, p. 44), and other functions including ‘to call helper spirits, to recover lost souls’ (Luna, 1986, 108–03, as cited in Graham et al., 2023, p. 8). They may also be used for sorcery (*brujeria*) (Brabec de Mori, 2017; Britt, 2023, p. 12). Knowledge of icaros is ‘a prerequisite to becoming a vegetalista’ (Luna, 2006, p. 42). Icaros represent the ‘intellectual heritage’ of mestizo curanderos, as well as being tools to ‘pass on knowledge and healing ability’ (Giove, 2022, p. 34), their effectiveness depends on the extent of a curandero’s preparedness through *dietas*, purges, and ‘the assimilation of ancestral knowledge’ (Giove, 1993, p. 1).

Vegetalismo cosmology holds that icaros are received from rainforest plants during *dieta* (diet), periods of seclusion in the forest during which apprentices undergo behavioural and dietary restrictions to learn the effects and uses of medicinal plants (Berlowitz et al., 2022; Demange, 2002; Jauregui et al. 2011). Studies including Luna (1984), Rittner (2007), and Bustos (2008) indicate ‘a widespread belief that these songs may be acquired directly from the spirits of certain plants, animals or other entities during dreams or in trance during the course of the shaman’s apprenticeship and ongoing career’ (Callicott, 2013, p. 34). Callicott (2013) and Re & Ventura (2015) suggest that this is a form of interspecies communication between plants and humans based on ‘phytochemical signals’ (Callicott, 2013, p. 32, 1984, p. 14). Conversely, Luna suggests the healer may compose the icaros but assign the agency to plants (1984, p. 14).

Icaros, like plants, may be used for specific healing functions. Songs associated with particular plants are understood to embody the healing essence of those plants; they may be used to invoke the curative properties of the plants, and to vaunt their healing powers. Luna (2006), referencing icaros from curanderos near Iquitos, notes that the icaro of bobinsana (*C. angustifolia* Benth.-Leguminosae), for example, can be used to clarify the mind (Luna, 2006, p. 42). According to Orlando Chujandama, chants of the cumaseba tree, which can withstand hurricanes, invoke strength (Demange, 2002, p. 54). At the Takiwasi Center for Addiction Treatment and Research on Traditional Medicines, the icaro of chiric sanango (Jauregui et al., 2011, p. 745) is used to cure problems related to rigidity and the ‘inability to receive or display human warmth’ (Bustos, 2006, p. 37). According to Bustos (2008) and Luna (2006) the use of icaros for healing within vegetalismo is disappearing; indeed, given that many Amazon ecosystems which have given rise to these practices are under imminent threat from climate change and human activity (Marques, 2024; Mataveli et al., 2024; Móstiga, Armenteras, Vayreda, & Retana, 2024), these traditions warrant ‘urgent’ further study and documentation (Luna, 2006, p. 46) to avert the loss of valuable ethnobiological and cultural heritage.

Bustos notes that the experience of icaros ‘tends to reach its peak, in terms of intensity scope, nuances, and depth, under ayahuasca effects.’ (2016, p. 225). Icaros may be sung in a mixture of Quechua, Spanish, and indigenous languages (Luna, 2011). Many songs refer to the plants that form the pharmacopoeia of botanical medicine used in the Amazon, others may refer to animals, spiritual entities, or reference Christian iconography, reflecting colonial influences in mestizo culture. Labate considers icaros as part of a set of ‘sacred technologies’ (2014, p. 1) which have been exported internationally due to a global expansion, diversification (Labate, 2014) and appropriation (Seddon, 2014) of Peruvian vegetalismo since the 1990s. Traditional medicine in Peru, as practiced today, is derived from a ‘blend of traditions’; indigenous, colonial and post-colonial (Berlowitz et al., 2018, p. 201). Contemporary syncretic practices of vegetalismo now found around the world, with influence from New Age spirituality and other sources, have been described as neoshamanism or neovegetalismo (Labate, 2014).

Musicologically, icaros tend to have repetitive features and simple strophic forms. Many are characterized by regular rapid rhythms, limited melodic variations, and two or three repetitive phrases (Bustos, 2006), which may be extemporised using non-semantic vocables (sound syllables) (Brabec de Mori, 2017). The use of a mixture of Quechua, indigenous languages, Spanish, and vocables may be used to impress and confuse rivals (Luna, 2006, p. 46), perhaps to avoid theft or to guard the power of the proprietary curandero, whilst lyrical features may include ‘twisted’ lyrics (Demange, 2002, p. 18) to ‘create images’ which assist introspection (*ibid*, p. 19). Bustos (2016) notes that for participants in ayahuasca rituals, the singing of icaros ‘influences the quality, structuring, and continuity of the state



of *mareacion* (inebriation) and, along with olfactory and tactile impressions also allow the participant to maintain a connection with 'this plane of reality' (p. 225). Many published studies on icaros have taken an anthropological or ethnomusicological perspective, foregrounding the songs' sociocultural function and significance in their emic contexts (Brabec de Mori, 2017; Callicott, 2013; Favaron, 2011; Luna, 2006; Rittner, 2007). Katz and Dobkin de Rios (1971) include musical notation of icaros heard around Iquitos. Other relevant studies are Bustos (2008, 2016), a detailed phenomenology of musico-healing experiences defined as 'intense' during ayahuasca rituals at Mayantuyaku, a center led by Asháninka curandero Juan Flores Salazar. This study suggests 'possible psychophysical mechanisms' (2016, p. 231) as counterparts to phenomenological experiences of healing with an icaro. Brabec de Mori (2009) compares case studies receiving both biomedical treatments and Shipibo indigenous treatments in the aim of exploring how the efficacy of icaros can be explained. He concedes that today's methods 'prove largely insufficient to fully explain the efficacy' of icaros (2009, p. 124). Graham et al. (2023), using an ethnographic method, give a health-centred phenomenology of icaros experienced by Takiwasi's addiction rehabilitation patients.

### Medical ethnomusicology

Music therapist Kenny (1982, 2002) has introduced concepts from indigenous North American musico-healing practices to music therapy discourse, and Fachner (2011) explores biomedical and therapeutic implications of music and trance in healing rituals. However, Brabec de Mori highlights a lack of research linking ethnomusicology to music therapy in the study of healing songs from the Western Amazon (2009, p. 124). The reason for this is cited as being a particular conceptualization of what music is within a European therapy milieu, that is, primarily 'an acoustic phenomenon' (*ibid*).

Whilst agreeing on the basic properties of music as an acoustic phenomenon, contemporary perspectives in music therapy tend to reject the idea that music has 'essential qualities' outside of context (Aigen, 2014, p. 5); instead, there is a belief that the value of music is created through the way that people engage with it (*ibid*, p. 6). Clinical music therapy, as a profession often working within or alongside a Western medical model, has historically tended to distance considerations of spirituality as an obstacle to professional legitimacy (Tsiris, 2017, p. 293). Although spirituality in medicine using music is part of healing practice (Aldridge, 2000) a biomedical view of health and disease is prioritised, in simple terms viewing humans firstly as a physical body (or 'a physical entity or mechanism' (Koen, Barz, & Brummel-Smith, 2008, p. 7), with a psycho-emotional aspect.

In contrast, traditional musico-healing practices may emphasise 'socio-cultural dynamics, spirituality, belief, and the metaphysical' as being central concerns contributing to health (Koen et al., 2008, p. 7). Amazonian cosmologies admit a spiritual or invisible world wherein health or disease

may originate (Giove, 2022; Rosengren, 2006; Tupper, 2009). In Shipibo medicine, for example, disease is understood to be caused by an imbalance between 'everyday reality and the world of spirits' (Rittner, 2007, p. 4); indeed, 'music is the language of the spirits, and the song is the appropriate mode for communicating with them' (Illius, 1997, p. 216 as cited in Brabec de Mori, 2022, p. 36). Amazonian worldviews hold that illness is caused by a 'break in the chain of harmony' (Giove, 2022, p. 28), and that it may originate not only in the physical but also in the 'spiritual body' (*ibid*). In an ayahuasca session, the curandero's aim is to seek access to these spiritual realms to 'search for visions or answers to improve the physical, psychological, or spiritual health of his patients.' (Giove, 2022, p. 26). This lack of equivalence in health ontologies has no doubt contributed to the research gap noted by Brabec de Mori (2009).

Considering similar themes in relation to a study of musico-healing practices of the Temiar in Malaysia, Roseman asks how experiences of transformation through music can be understood 'in indigenous, ethnographic, and biomedical terms' (2008, p. 27), given that music's agency spans distinct spheres; the physical acoustics of sound, biophysical domains of 'perception and sensation', and sociocultural realms of meaning (2008, p. 27). Medical ethnomusicology offers the possibility of bridging this ontological divide, permitting an integrative, ontologically agnostic framework in which 'medical, cognitive, and applied ethnomusicology, [...] music cognition, music therapy, music psychology, neuroscience of music, bi-musicology' (Koen et al., 2008, pp. 5–6) are woven with transcultural studies in health research, giving space for consideration of both Western biomedical perspectives and emic explanations of effects.

### Ayahuasca

Ayahuasca is a sacrament to many in the Amazon and beyond (Blocksom, 2015; Feeney & Labate, 2013; Tupper, 2009), but a scheduled drug to Western legislators (Feeney & Labate, 2013). One of its active components, N, N-dimethyltryptamine (DMT), in its extracted form, is scheduled as a class A drug in the UK, and is illegal in many other Western countries. Ayahuasca has origins which are the subject of indigenous cosmologies and creation stories (Luna, 2011; Shannon, 2011, p. 286). From the Quichua, 'aya'; spirit, and 'wasca'; vine (Luna, 2011, p. 3), also translated as vine of the soul (Jauregui et al., 2011, p. 747) it is a psychoactive brew which produces 'a transient modified state of awareness characterised by introspection, visions, and autobiographical and emotional memories' (Domínguez-Clavé et al., 2016, p. 89). The perceptual effects of ayahuasca include distinct auditory-perceptual changes as well as changes in the other sensory modalities (Shannon, 2011). Synaesthesia-like experiences are common. The auditory effects are summarised as follows:

'The musical effects are grounded in the non-ordinary perceptions of auditory stimuli. Overall, with ayahuasca, people's audition becomes subtler and more acute, and



auditory stimuli sound fuller and stronger. With this, one may have the sense of detecting sounds that are not perceived in ordinary conditions. The spatial location of sounds is also transformed, such that sounds are heard as coming from locations and directions that do not correspond to their real-world locations. One consequence is that the music may also be experienced as engulfing one in a quasi-physical fashion, leading the listener to feel transported to other realities' (Shannon, 2011, p. 7).

## Effects and risk factors

The psychopharmacological effects of ayahuasca are well documented (Domínguez-Clavé et al., 2016; Dos Santos, Osorio, Crippa, & Hallak, 2015; Frecska, Bokor, & Winkelman, 2016). Generally, physiologically safe to ingest for healthy people (Domínguez-Clavé et al., 2016, p. 92), it has biophysical effects such as 'low-to-moderate' increases in heart rate and blood pressure (*ibid*) and feeling hot or cold (*ibid*, p. 91). Nausea and emesis are common (Politi, Tresca, Menghini, & Ferrante, 2021; Schenberg et al., 2015). Ayahuasca *mareacion* (inebriation) can produce auditory-to-visual synaesthesia (Shannon, 2011), involving closed-eye visions that may span from abstract to figurative forms (*ibid*, p. 10). It can bring about spiritual experiences (Trichter, 2010; Trichter, Klimo, & Krippner, 2009; Tupper, 2009), personal insights, 'deeply introspective experience' (Riba et al., 2006), and unitive states of consciousness (Bustos, 2016). The necessity for ayahuasca to be taken in a ritual setting under the guidance of an experienced curandero is implicit within vegetalismo (Luna, 2011).

Ayahuasca has been central to a proliferation of biomedical and psychological research in recent decades (see Labate, 2014, p. 71), pointing to an array of beneficial clinical outcomes for conditions from depression (Dos Santos et al., 2015; Giovannetti, Garcia, Rush, & Mendive, 2020; Palhano-Fontes et al., 2019), to addiction (Berlowitz, Walt, Ghasarian, Mendive, & Martin-Soelch, 2019; Dubbini Mabit & Politi, 2020; Mabit Giove & Vega, 1996), chronic 'diseases of civilisation' (Frecska et al., 2016), neuroinflammatory conditions (Szabo & Frecska, 2016) and others (Domínguez-Clavé, 2016; Maia, Daldegan-Bueno, & Tófoli, 2020).

Soler et al. found an increase in 'mindfulness capacities' amongst users (2016, p. 823), which may be a psychological mechanism underpinning ayahuasca's effectiveness (Domínguez-Clavé et al., 2016, p. 96). The same study found that the admixture can significantly increase decentering; the detached observation of 'one's own thoughts or emotions' (Soler et al., 2016, p. 825), shown to have psychological benefits (Gecht et al., 2014). Ayahuasca activates brain regions including the left amygdala and parahippocampal gyrus (*ibid*), which are key to emotional processing and memory formation, and the right anterior insula (Riba et al., 2006), associated with interoception; the awareness of physiological states within the body. Domínguez-Clavé et al. suggest that activation of the left amygdala and parahippocampal gyrus 'potentially opens the limbic pathways of the brain to influence the emotional core of trauma'

in sufferers of trauma (2016, p. 97). Loizaga-Velder writes that ayahuasca 'can facilitate introspection, the processing of unconscious psychological material, and emotional catharsis' (Loizaga-Velder, 2013, p. 38).

Ayahuasca can bring on unwelcome or challenging experiences comparable with those that may occur with other psychoactives such as psilocybin (Barrett, Bradstreet, Leoutsakos, Johnson, & Griffiths, 2016). Its effects can carry psychological (Kavenská & Simonová, 2015) or medical risk factors for some people. Domínguez-Clavé et al., cite the greatest psychological risks as anxiety responses or dissociative episodes, associated with high doses (2016, p. 92). Problems associated with 'ego-dissolution' (Lebedev et al., 2015), such as spiritual crisis (Lewis, 2008) and subsequent psychological integration difficulties (Kavenská & Simonová, 2015) have also been cited. Schizophrenia or psychotic illness are considered a contraindication to ayahuasca use (Dos Santos & Strassman, 2011), as are, for example serious metabolic problems or functional deficiencies of the major organs (Mabit, 2014). Experiences of 'ego-dissolution' can also be beneficial, as noted by Barrett Johnson and Griffiths (2016). Contextual factors relating to the ritual setting, personal integrity of the curandero (Kavenská & Simonová, 2015, p. 354) and availability of prior and subsequent psychological support are also factors affecting the safety of use, especially for those without prior experience.

In spite of the wealth of health-related research into ayahuasca, the experiences and health outcomes of the icaros and other music which accompany its use have been less studied. This study focuses on participant experiences of icaros, as sung at the Takiwasi Center, an integrative treatment setting in San Martín province, Peru.

## The Takiwasi Center

Takiwasi, meaning 'house of song', incorporates Western psychotherapy and ritual practices of traditional Amazonian medicine into a residential programme for patients with addictions (see Horák, 2013; O'Shaughnessy, 2017). In addition to its addiction treatment programme, the center offers retreats for healthy visitors interested in experiencing TAM for personal development. Takiwasi is also an active interdisciplinary research center into TAM, where staff comprise Western-trained medical & psychotherapeutic practitioners who work alongside local, and sometimes visiting curanderos. The Center's treatment approach demonstrates a 'deep integration between Western scientific medicine and animist ontologies' (Dubbini, 2021). For patients at the Center, Western diagnoses and treatment methods are broadly used to prepare for and support the TAM focus of the treatment (Giovannetti et al., 2020; Horák, 2013; Mabit Giove & Vega, 1996; O'Shaughnessy, 2017). For both residential patients and retreat attendees, Takiwasi emphasises the spiritual as well as biomedical aspects of TAM. Founding members of the Center, French-born Dr. Jacques Mabit, and Peruvian Dr. Rosa Giove Nakazawa





(1952–2022) trained in both Western medicine and Amazonian traditional modalities. Icaros from the region and further afield, as well as newer songs introduced by center staff, are central to the TAM ritual aspect of its treatment provision. Graham et al. note that a particular influence on Takiwasi's healing model comes from the local Quechua-Lamista indigenous population of San Martín province, as well as from local mestizo practice (2023, p. 5). As well as icaros, Christian prayers are heard during Takiwasi's rituals. All center staff who actively facilitate ayahuasca rituals sing icaros.

O'Shaughnessy (2017) notes that TAM practice at Takiwasi is 'closely linked' with traditional mestizo vegetalismo; it espouses a 'traditional mestizo understanding' of ayahuasca ritual (p. 215) as opposed to a more globalised or neoshamanic one which prioritises Western individualism (Gearin, 2015; Labate, 2014). However, O'Shaughnessy also notes that the way in which TAM is practiced at Takiwasi has characteristics which Labate (2014) assigns to 'neo-vegetalismo' such as processes of 'scientization', 'professionalization' and 'psychologization' (O'Shaughnessy, 2017, p. 46). These features might also be considered in relation to a drive toward academisation or codification of vegetalismo in the interests of its preservation.

Berlowitz et al. describe the Takiwasi Center as a 'boundary object' (2018, p. 208) or a 'third space' (*ibid*, p. 201) amidst the anthropological complexity of Peruvian vegetalismo practices. In knowledge management, a boundary object (Star & Greisemer, 1989) can facilitate 'the distributed structure of the development of heterogeneous knowledge within epistemic communities' (Trompette & Vinck, 2009, p. 4) and 'transports a set of conventions, standards and norms indexed to a community of practices' (Trompette & Vinck, 2009, p. 4). Takiwasi's effectiveness in translating and coordinating between the divergent epistemologies of TAM and Western psychology/biomedicine, as well as its successful promotion of the recognition of TAM and the ayahuasca ritual as part of national cultural heritage of Peru (Giove, 2022), make this descriptor seem apt. This study should be considered as an investigation of Takiwasi's unique example of vegetalismo practice, not of vegetalismo as a whole. Takiwasi's work and research output coordinates and translates between epistemic communities interested in TAM, biomedicine, addiction treatment, indigenous cosmology and spirituality, psychopharmacology and ethno-botany, amongst others.

### The ayahuasca ritual in Peruvian vegetalismo & at Takiwasi

Ritual is a key part of Peruvian vegetalismo (Apud, 2015; Foutiou, 2012; Labate, 2014; Shannon, 2011) and other practices of TAM. According to Winkelman, shamanic rituals have evolutionarily adaptive origins based in their function as 'systems of group coordination and communication' (2013, p. 80). Night-time ayahuasca rituals typically take place in a thatched hut called a *maloca*, starting after nightfall and lasting until sunrise. Ritual forms vary

according to place and practitioner (Shannon, 2011, p. 4) but a generalised description of a Peruvian mestizo ayahuasca ritual follows. The opening of a ritual involves a curandero using icaros and tobacco to energetically charge (*cargar*) ceremonial items, such as ritual objects on a *mesa* (altar cloth), the bottle of ayahuasca, and perhaps *encantos* (magical stones) (Luna, 2011) or other items. The icaros are understood to imbue these ritual objects with power (Giove, 1993), thereby activating their capacity to function as tools of healing in the ritual. Ayahuasca is ingested by participants who sit (or may lie) on the floor around the sides of the *maloca*. The curandero sings – incants – icaros throughout the night, at times selecting specific icaros for particular individuals or directing songs at close range towards the bodies of participants. Icaros may also be whistled (Katz & Dobkin de Rios, 1971). They are usually accompanied by a leaf shaker called a *chacapa* and sometimes by other instruments such as rattles. The *chacapa* has spiritual as well as percussive functions. According to Bustos it is used for threefold purposes of '*ventear el mal*' (blowing away the sickness), 'sealing' a client's energy and stimulating visions (2008, p. 32). It is used for ritual healing techniques such as *limpieza* (cleansing) with Agua Florida or natural perfumes, as well as for marking time; the percussive sound of its dried leaves can often be heard throughout the night. Icaros are interspersed with *soplada*; the blowing of mapacho tobacco to protect the space or cleanse the energies of participants.

### Icaros as a healing tool within the ayahuasca ASC

Bustos calls icaros a 'healing technology' (2016, p. 231), used within the 'healing art', and 'embodied practice' (*ibid*) of vegetalismo. It is not just the icaros themselves that are effective, but singing 'in a particular context and moment of a patient's inner process' during an ayahuasca ritual (Bustos, 2016, p. 231); highlighting that an experienced curandero is both intimately familiar with the stages of the ritual and corresponding ASC, and is using a timed, skilled interpersonal intervention within it. Bustos suggests that the healing impact of icaros is attributable to how the healer navigates the 'intricacies of the situation in deep collaboration with the healing forces made available by [...] ayahuasca' (*ibid*).

Shannon's cognitive phenomenology of the ayahuasca experience (2011) notes that music has 'a great influence' on experiences of a ritual (2011, p. 284), and many commonly experienced effects of music are 'greatly amplified and accentuated' by the psychophysical effects of ayahuasca, which 'significantly enhances people's aesthetic sensitivity and appreciation' (*ibid*). The enchanting and beautiful qualities of music are often accentuated, as are its meaningfulness and capacity to evoke deep emotion (*ibid*, p. 284).

Along with the auditory effects, 'non-standard parsing' (structural grouping of sound) can also occur (Shannon, 2011, p. 284). There is an overall enhanced 'conferral of meaningfulness and [...] feeling of heightened understanding' which applies particularly to music (*ibid*). Modified perceptions of sound may go along with 'unusual interpretations of the source of the sound and its nature'



(p. 285). Synaesthesia, or cross-modal perception is 'prevalent' (p. 286), although, according to Terhune et al. (2016), doesn't meet clinical definitions of synaesthesia. Of all forms of synaesthesia, the most commonly experienced during ayahuasca ritual is 'auditory-to-visual' (Shannon, 2011, p. 286), and this is most often 'associated with music' (*ibid*) rather than, for example, environmental sounds.

## METHODS

Participants were five men and one woman, all healthy adults with an interest in personal or spiritual development, aged between 30 and 60. Professions of the participants were medicine; psychotherapy; holistic health; education; skilled trades; business management. Participant numbers (P1 – P6) are used to protect anonymity. Qualitative data were gathered in the form of semi-structured interviews with the 6 ritual participants, based on experiences of a single healing ritual with ayahuasca held at the Takiwasi Center (referred to as 'night X'). This formed the primary data for the IPA. Secondary data were also collected via short interviews with the healers present on the use, function, and beliefs about icaros. Audio recording of the ritual was made to allow cross-referencing of audio data with interview data relating to songs.

The ritual (which broadly took the form described above) was attended by five healers. All healers present were Takiwasi staff, including center co-founders Jacques Mabit and Rosa Giove, a psychotherapist, and a hereditary mestizo curandero employed by the center; all sang icaros. Jacques Mabit was designated 'lead healer'. To avoid unintended involvement with the highly personal processes of the retreat group, the researcher maintained a semi-outsider status, not participating in the retreat other than to present the research and conduct interviews. Audio recording was made without researcher presence at the ritual; a recording device was positioned discreetly in the *maloca* and recording started before participants arrived; the researcher then left the space and the ritual proceeded undisturbed by outside parties.

### The ritual ('Night X')

Participants had been orientated for the ritual according to Takiwasi's guidelines for visitors and patients. They had received preparatory information on the effects of ayahuasca, advice on how to best approach the ritual, and on advisable behaviour during the ceremony. Participants wore white, and were advised, for example, to sit up rather than recline. Over 60 icaros were sung during the ceremony, which lasted over 6 h. *Chacapa* and rattle were used throughout the night and periods of silence were brief compared to the time duration of singing. Christian prayers were incanted at the beginning and end of the ceremony. Unless a participant called for assistance, interpersonal interactions were initiated by the healers and took the form of ritual techniques such as being sung to at close proximity, the receiving of ritual healing elements of *soplada* and *limpieza*, accompanied by the icaros, rattle and/or *chacapa*. The

dose of ayahuasca at Takiwasi is individualised, a typical dose being around 30 mL.

## Interviews

Semi-structured interviews (mean length 46 min) were conducted between 36 and 58 h after the end of the first ayahuasca ceremony of the retreat. Of a final sample size of 6, four interviews were conducted in French, and two in English. The interview consisted of open-ended questions designed to elicit experiences of the songs heard during the ceremony. Questions addressed emotional and perceptual, somatic & spiritual experiences related to songs and the auditory environment, issues relating to memory of songs, thought processes and any negative experiences, semantics/understanding of lyrics. Interviews were anonymised, transcribed verbatim and then transcript data relating directly to the experience of songs on night X were identified.

## Data analysis

Interview data not relating to the songs or auditory experience of night X were excluded. Song- and auditory-related data only were extracted from transcripts and data extracts were coded with theme/category tags. Example code tags were: #effect of song #metaphors for songs #impact of singer #beliefs about songs #particular songs. These code tags were compiled into complete sets of codes for each participant supported by narrative transcript summaries with notes about participants' body language and nonverbal expression during the interview. Code tags were compiled into flexible lists of categories, which were iteratively rearranged into groupings to develop conceptual structures for the data. A parallel process of analysis was used; one was associatively/thematically driven and therefore strictly phenomenological/'IPA'. The other involved an initial two-way division of data into categories of 'primary' or first-order experiences of songs and 'analytic' or second-order responses to songs.

The latter, 2-way division of data corresponded broadly to Smith Flowers and Larkin's 4 layers of the phenomenological experience (2009, p. 189). Layer 1 is unselfconscious or pre-reflective awareness and layer 2 is 'undirected reflection on the pre-reflective' (*ibid*). Layer 3 is attentive reflection and making sense; and layer 4, 'deliberate controlled reflection' (*ibid*). Of these, Layers 1 and 2 of Smith Flowers & Larkin's model (2009) were understood as broadly equivalent to 'first-order' experiences (Berkovich-Ohana & Glicksohn, 2017; Zahavi, 2009), defined as related to physiologically perceptual experiences which could be deduced to have happened during the ritual. These were indicated by words such as 'sensation', 'emotion', 'see', 'physical', 'voice'; 'felt' in the data. Layers 3 and 4 were taken to be second-order experiences defined broadly as higher-level interpretative responses, indicating some level of introspection or thought around the subject matter, either during or after the ritual.

The songs recorded on night X were catalogued with titles, time markers, and meta-data identifying singer, lyrics, and other features. Where possible/relevant these were



cross-referenced with existing recordings of Takiwasi icaros and to transcriptions of lyrics, to assist with the understanding of songs and their placement within the ritual.

During several iterations of the grouping/regrouping process, relationships in the data were explored, resulting in an arrangement of superordinate and subordinate data clusters. Out of up to 40 initial groupings, 8 superordinate phenomenological clusters (SPCs) were elaborated: 1. Making space for healing and transformation; 2. Responding to altered perceptions; 3. Songs as orientators and mediators; 4. Sense-making through metaphor; 5. Trusting and letting go; 6. Inclinations towards the unseen; 7. Psychotherapeutic, archetypal and transcultural resonances; and 8. Impact of culture and previous experience. Finally, without changing their phenomenological quality, SPCs 1–6 were found to be mappable onto 4 meta-categories, defined as A: Psycho-physical and psycho-emotional experience; B: Non-ordinary experience; C: Cognitive-psychological experience, and D: Spiritual and religious experience. To keep results focussed on experiences of night X, SPCs 7 and 8 are not discussed in detail. 18 clusters, from SPCs 1–6 and subordinate clusters, are presented under the 4 meta-categories. Instances of experiences were numerated (Smith Flowers & Larkin 2009, p. 98) and only experiences described by two or more participants are presented in the results.

## Ethics

This study obtained ethical approval from the Research Ethics Committee of the University of the West of England, U.K. prior to commencing the research. Participants gave written informed consent prior to interviews, and verbal informed consent was obtained for the audio recording of the ayahuasca ceremony. Eligibility criteria for study participants included passing Takiwasi's screening for medical and psychological suitability for treatment with TAM / ayahuasca. Due care has been taken to protect the anonymity of all participants in the study, and participant wellbeing was considered throughout.

## RESULTS AND DISCUSSION

Participants had varying degrees of previous experience of rituals at the Takiwasi Center. Those with more experience knew many of the songs by heart (some owned CDs of Takiwasi icaros<sup>1</sup>) and several compared their experience on night X to previous sessions at Takiwasi. At times during interviews, these participants hummed or whistled a melody to aid identification of songs whose lyrics they weren't able to recall. Two participants (P1 and P3) were attending for the first time. Most participants were able to clearly recall strong experiences which occurred during the singing of the icaros on night X, but had more difficulty correlating these experiences with specific songs. This may have been due to the elapsed time between the ceremony and the interviews and to a large number of songs sung (66).

The main reasons given for attending the retreat were noted as: for help with a spiritual problem (P1 and P6); to

work on a family problem/on personal & emotional life (P2); to improve or make changes in life (P3); to work on ego issues/being more tolerant (P4); to work on relationship issues (P5); to cleanse and replenish one's energy (P6).

The repertoire of icaros used at Takiwasi includes songs received or passed on from a range of mestizo and indigenous curanderos with whom Takiwasi staff have apprenticed, or who had previously worked at the center. As well as mestizo icaros, songs may have come from local Quechua Lamista, as well as more geographically distant Asháninka, Awajún, or other origins. Takiwasi's repertoire includes several icaros received personally by healers working at the center (notably Mabit and Giove) during their own apprenticeship in TAM; with several in French.

A majority of participants expressed a general liking for the songs, a few had preferences for some in particular, and more than one mentioned previously listening to recordings of the songs in daily life. Baseline exposure to songs was therefore variable. The song most often named by participants was *Ábrete corazón*<sup>2</sup> ('Open your heart') (Giove); mentioned by 4 participants. Songs in French; *Les tréfonds* ('In the depths') (Mabit) and *Le cœur sait bien tout ça* ('The heart knows all that') (Mabit), and the traditional icaro, *Cancion para llamar la mareación* ('Song for calling the effects of the medicine') were all mentioned at least twice. Figure 1 gives an overview of the meta-categories and phenomenological clusters presented in the results.

### A: Psycho-physical and psycho-emotional experiences

Participants described a readiness to face the unfamiliar or unpredictable experiences of the ritual. This included aspects such as taking a stance of openness or willingness to accept the changing flow of experiences. P2 said *'I made sure I was as open as possible'*. Following the lead healer's advice, for the whole ritual P2 was *'on the lookout for sensations and emotions'* – this was *'as if I was saying to the songs 'go on, heal me, cure me'*. P3 was *'open to just be there and experience whatever would come'*. Similar attitudes were found to be predictive of 'optimal immediate and longer-term outcomes' for participants listening to music in psychedelic-assisted therapy (Kaelen et al., 2018; O'Callaghan, Hubik, Dwyer, Williams, & Ross, 2020). Musical qualities of song itself, as well as of the voice, 'energy' and identity of the singer impacted on individual experiences.

A positive relationship with the healers seemed to contribute to overall positive experience, as did interpersonal interactions with them during the night. In Bustos' study, healing with an icaro was found to be a 'relational process' (2008, p. 161), within a context where participants demonstrated trust in and a commitment to working with a particular healer (2008, p. 160). Here, participants expressed belief in the curanderos' benevolent intention, and gratitude for their presence and care, shown in Table 1 [A.3]. This seemed important in achieving a state of trust and openness towards healing. Comforting or reassuring experiences categorised in [A.2] and [A.4], along with the voices of the curanderos, seemed to enable participants to relax into the



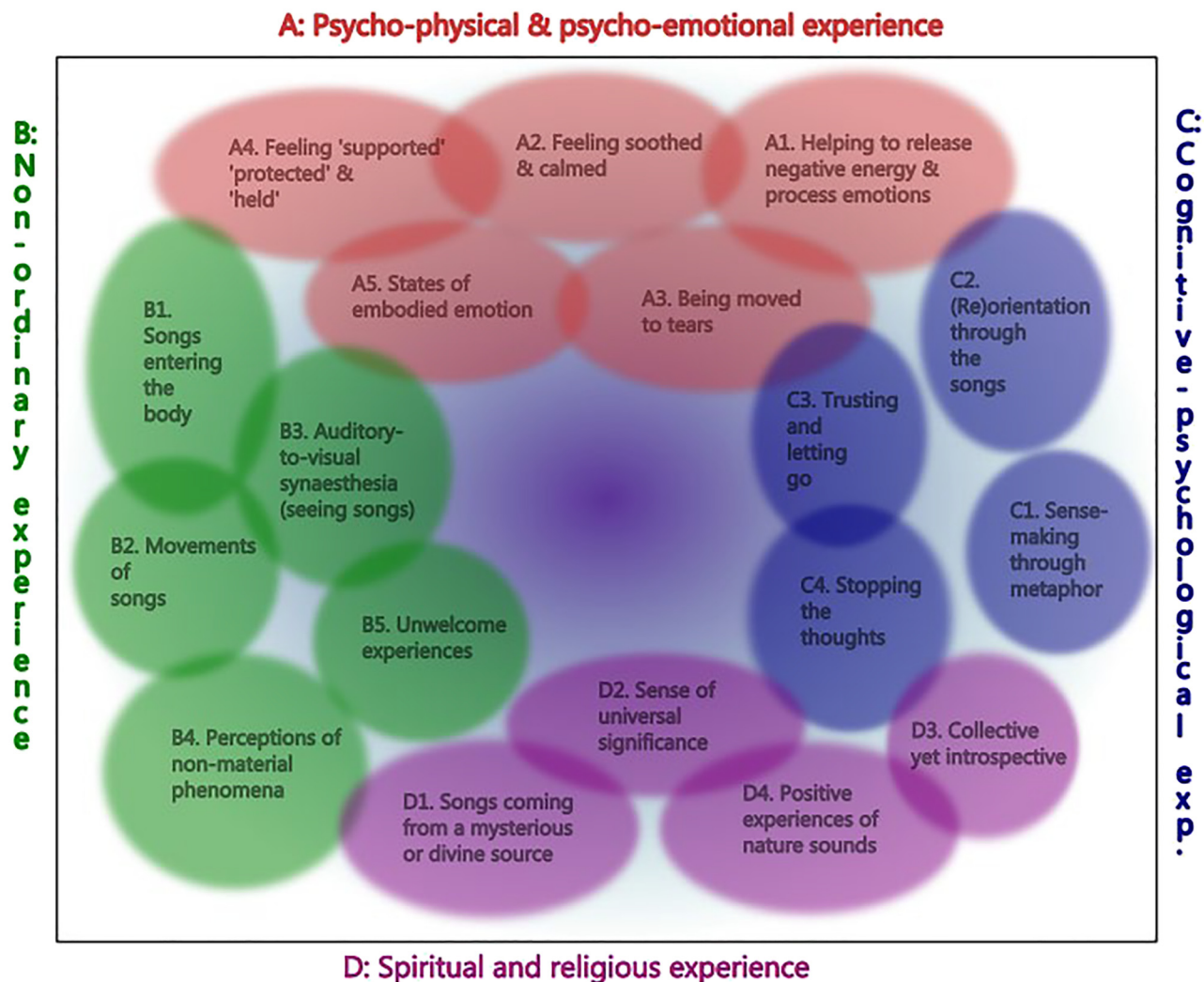


Fig. 1. Results overview: meta-categories A-D

night; P1 and in P3's experience the songs provided an element of holding with a parental or compassionate character; for P3, the songs of the female singers were *'like what I wish I'd had as a mothering experience'* whilst for P1 there was a *'very masculine'* aspect to the supportive nature of the songs; *'the kind of security of someone who says stay upright, [...] you can lean on us but you also have to support yourself'*. Songs seemed to contribute a sonic layer of containment to the experience of the ritual, which was already clearly delineated by the designated ritual space; the *maloca*, and the orientation and guidelines provided by Takiwasi.

Emotional expression (Romito, Lagattolla, Costanzo, Giotta, & Mattioli, 2013; Saarikallio, Tervaniemi, Yrtti, & Huotilainen, 2019; Volgsten, 2012) and affect regulation (Baltazar & Saarikallio, 2019) are recognised as a desirable outcome of music therapy; in which personal meaning is related to valence peaks in emotion processing (Fachner et al., 2019). Albornoz (2013) notes that crying is recognised as a *'helpful release of pent-up psychic energy'* in the psychotherapeutic literature (2013, p. 32), whilst *'successful emotional processing'* has been correlated with positive treatment

outcomes in psychotherapy (Peluso & Freund, 2018). The concept of emotional breakthrough (Roseman et al., 2019), which is *'related to personal and interpersonal insights'* (*ibid*, p. 1077), has been shown to be predictive of wellbeing (*ibid*) in psychedelic-assisted therapy. Data in [A.1] revealed experiences of processing emotion or releasing *'negative energy'* described as getting rid of or releasing *'knots'*, *'bad energy'* (described as *'old demons'* by P6). For P6 and P4 energy rose up the body to be released, whereas P2 described how emotions of sadness or anger that *'melted'* from P2's body when the song *'appeared'*, bringing about a bodily sense of joy [A.1]. P6 described being able to see the curandero taking away this negative energy. *'I see that he's taking the bad energy [...] I have visions where I see that it rises up like that and he takes it away.'* Giove concurs that icaros have the effect of *'pulling out'* (*ir sacando*) (secondary data). Emotional as well as *'energetic'* release was experienced in response to the songs, this included crying tears of *'emotion'* [A.3], which were welcomed and appeared to have been therapeutically helpful for P1 and P2. As well as the songs themselves, vocal qualities such as tenderness, lyrics of the songs and a sense of care



Table 1. Data on psycho-physical and psycho-emotional experiences (meta-category A)

<b>A.1 Helping to release negative energy &amp; process emotions</b>	<p><i>'When I hold on to the songs, it helps me get rid of bad energies, it helps me to vomit, it helps me to go deep and to cleanse myself' P6</i></p> <p><i>'Before the song, maybe I had some sadness here and some anger there. The song appears, these sensations melt, and the body starts to feel a joy which of course translates to the mind, but it starts with the body' P2</i></p>
<b>A.2 Feeling soothed and calmed</b>	<p><i>'Certain songs...clearly have a more powerful effect than Valium- medications like that - they soothe the body and the mind' P2</i></p> <p><i>'first the song consoles the emotions; it's almost instantaneous.' P2</i></p> <p><i>'In M's songs there was a kind of unconditional acceptance' P1</i></p>
<b>A.3 Being moved to tears</b>	<p><i>'They're not tears of crying, of suffering and sadness that come out - it's really 'thank you for being there for me' P1</i></p>
<b>A.4 Feeling 'supported', 'protected' and 'held'</b>	<p><i>'The songs accommodated it all, they carried it all, I felt [...] the songs protected us from all the slipups that could have occurred' P1</i></p> <p><i>'for the women's song I felt I was being taken care of, it was like "don't worry, don't worry we are there for you" it was more like being held' P3</i></p>
<b>A.5 States of embodied emotion</b>	<p><i>'Certain songs had an effect... they brought about a physical joy; others brought a sense of sweetness, others gave rise to a sense of power, will, mental force, but it was all on a physical level' P2</i></p>

from curanderos were mentioned as catalysts for this emotional expression. P2's experience [A.1] of sadness or anger 'melting' from different parts of the body and [A.5] was similar to experiences in Watts, Day, Krzanowski, Nutt, and Carhart-Harris (2017), where 'embodiment of emotion' was found as an effect of music under psilocybin (*ibid*, p. 540).

## B. Non-ordinary experience

Participants described ways in which they noticed and responded to the altered sensory perceptions of the ASC, including to the changes in auditory perception. These were noted as unfamiliar or novel ways of perceiving, responding and being aware, sometimes described with an affective undertone. P6 said that *'the sensations are exacerbated, the songs get multiplied'*, and P2 commented on the shift in auditory perception: *'sounds sounded nearer. If you're actually two metres away, it seems like you're a metre away, or the sounds of the forest are ten metres away, [...] but it sounds like they're five metres away'*. Table 2 shows data from meta-category B; non-ordinary experiences.

Icaros may be understood within vegetalismo to help healing energy to enter the body (Rittner, 2007, p. 11). According to Mabit and Giove (secondary data), they interact with a patient's 'energetic body' (*cuero energético*) to effect healing. Three participants' (P3, P4, and P5's) lived experiences supported this idea; songs were experienced somatically

[B.1], and as being directed into the body with intentionality [B.1.2]. P5's sensation was of icaros being sent to different parts of the body [B.1.2] depending on pitch; it was *'like they were sending the song to different places' [...]'I had the impression [...] that sometimes they were speaking to me here, sometimes they were speaking to me there[...] as if the songs were being sent to different places depending on their vibration they went downwards or more into the stomach, or more into the heart'*, whereas for P2, *'when you listen to them they come and incarnate in your mind and body'*.

Embodied experiences such as these are seen as being 'in contrast to a Cartesian view' (Kossack, 2009, p. 14), which, according to some, remains the dominant philosophy of Western medicine (Correll, 2022; Lushch, 2015). Graham et al. note how a continued legacy of Cartesian mind-body dualism still underscores questions of how music can 'effect healing, given that, physically, it is nothing more than pressure waves that barely penetrate the skin' (2023, p. 3). Participants' reports here highlight a phenomenological landscape of embodied, somatosensory musical experiencing that does not sit within demarcated mind-body limits, indicating a space for further exploration unrestricted by dualistic constraints.

[B.1.1] suggests an experience of extra-musical qualities being conveyed via the songs, as if the songs had put something beneficent in P3's body whose full effect was not yet fully understood. P5 said *'it's like a song sends a thing into your body'*. P2 also had the sense of extra-musical

Table 2. Data on non-ordinary experience (meta-category B)

<b>B.1 Songs entering the body</b>	<p>B.1.1 'something was mysterious and had an implied meaning or an implied power that... was getting into me, that I was not rejecting [...] and that would be meaningful later' P3</p> <p>B.1.2 'like they were sending the song to different places' P5 'I had the impression [...] that sometimes they were speaking to me here, sometimes they were speaking to me there[...] as if the songs were being sent to different places depending on their vibration [humming to indicate pitch] they went downwards or more into the stomach, or more into the heart' P5</p> <p>B.1.3 'when you listen to them they come and incarnate in your mind and body' P2</p>
<b>B.2 Movements of songs</b>	'I would say sneaky, you know like a snake [...] they go round you and it allows [you] to release some other things which cannot be released by the ones which are very intense' P4
<b>B.3 Auditory-to-visual synaesthesia</b>	'each time it was a new song I had an outburst of a new colour and each time very, um not just a single colour, more a kind of theme, a colourful theme' [of] 'moving dancing colours' P3
<b>B.4 Perceptions of non-material phenomena</b>	<p>'It was a kind of very strong green vine that curled around my spine and kept me upright' – 'as perceptible as I see you now' P1</p> <p>'During the purga a kind of green ball put itself in me and it said 'you're at home, stay there'...' it was during M's songs that it really placed itself there' P1</p>
<b>B.5 Unwelcome experiences</b>	'as if a tool was trying to make its way into me [...] it's something that was ...persistent and resistant in a disagreeable way' P3 'some were really soothing and others were kind of [...] intruding' P3

elements being conveyed by the songs; in this case these were emotional qualities of love and affection: 'you feel the benevolent intention of the healers - through the songs, through their voice, through their intonation they give their affection and love... it comes through the song'. This was described as 'an interaction that you feel very deeply between the curandero and the patient' (P2); also described as an 'intercession', with associations of help or cure via a higher power. Overall, qualities of love, affection (P2), power, and meaning (P3) were experienced as being conveyed or imparted via the songs. P4's experience of snake-like movements of a song suggested a sense of living agency similar to an 'agential character' of music noted in a psilocybin study by Noorani et al. (2018, p. 762).

Many experiences fitted with auditory-related phenomena of the ayahuasca experience described by Shannon (2011). P3 experienced auditory-to-visual synaesthesia in which visions sometimes changed in time with the song [B.3]. Distinct colour palettes appeared with the songs and different colours emanated from the songs of different healers; 'the blue colours came with songs from the Indian [sic] men.... and the yellow and more earth colours were coming from Jacques' songs and the red and pinks were coming from the women' (P3). This was accompanied with

affective reactions of wonder or amazement. The experience was 'fabulous' and 'very beautiful', inducing a feeling that was 'more than enjoyment; like a bewilderment – you know, marvelling' (P3). Conversely, for P2 the visions had an unpleasant character and were met initially with aversion 'oh, it's just bullshit' [...] 'I thought go away, I don't need that' (P2), which later resolved to acceptance.

For different participants, visions [B.3] spanned abstract and figurative forms, (as described by Shannon (2011, p. 10). Although participants were generally unable to correlate specific icaros with specific visions in memory, the relationship between songs and visions was described by P2, P3 and P4 as having a clear sense of causality. For P2 this was described as an effect like 'photographic developer' or a 'chemical reaction' suggesting a direct catalytic effect. For others, the correlation described between song and experience was looser, such as in P1's experience in [B.4]. For P3 and P6, the effects of songs were enhanced when two voices were singing. P6 described the sounds of several voices merging into one, an effect which allowed P6 to 'be transported'. A similar effect is noted by Luna (2006, p. 44), who writes that several maestros or singers singing concurrently may enhance 'the emotional state of the participants, or may even alter or intensify the content of their visions'.

**P2's experience: processing life's imprints?** P2 experienced unpleasant visions being actively generated by the icaros. These were expressed through strong metaphors:

*'[It was] as if the songs brought into being or gave birth to certain images, which could be a bit [...] twisted, complicated, unpleasant...as if the song was a midwife, effectively – the song was a kind of birth-doctor which came to help birth these slightly monstrous things in order to heal them better and release them from me, from my mind'*

P2 thought these visions were self-revealing:

*'I think [the icaros] were trying to illustrate a worry, a torment, a problem, a fear of some kind, represented in a symbolic way'*

P2 also felt that the content of these visions may have represented early life or other personal aspects:

*'These images help me, because they want to show me things that are a bit warped about myself. I don't know [...] whether they were showing my childhood or my adolescence or my way of thinking, it doesn't matter – these images came, I accommodated them, I accepted them, and they disappeared'*

An initial aversion to these visions gave way to 'accepting' and 'accommodating' them, apparently signifying a level of healing for P2.

*'instead of looking at it like 'oh, that's amazing – Star Wars, Hollywood!', no – I accommodated it. Whether it scared me or made me angry or whatever, I accommodated the fear or the anger associated with the image, and then [...] notably with the help of the songs – these images disappeared'*

P2's experience seems to describe a kind of beneficial emotional or psychological catharsis being facilitated by the icaros, as if P2 was processing or eliminating unhelpful or subconscious psychological imprints or impressions. This experience seemed to point to Bustos' findings about icaros granting 'access to the process of psychophysical symbolization of response patterns' (2016, p. 227), suggesting a possible connection to neurobiological processes of emotional processing or trauma release. Whilst [A.3] points to a straightforward process of emotional release or crying, this experience suggests more complex processes involving memory and earlier life experiences.

### C. Cognitive-psychological experience and beyond

Meta-category C (see Table 3) illustrated participants' experiences of different states of mind, active and receptive types of thought, cognition, or perceptual awareness in relation to songs, corresponding to Smith Flowers & Larkin's levels 3 and 4 (2009, p. 189), or second-order phenomenological reflection (Zahavi, 2009). Category [C.4] suggested moving beyond thought. The songs were experienced as helping participants gain a sense of psychological and sensory orientation within the ritual. This fitted with the observation that music could 'simultaneously anchor and propel' (O'Callaghan et al. 2020, p. 283).

Focussing on songs was important for most participants; for many this was conveyed through metaphors [C.1] of holding onto, grabbing or attaching themselves to the songs. P1's description of holding onto songs 'like Ariadne's thread in the labyrinth' evoked a mythical sense of the songs'

Table 3. Data on cognitive psychological experience (meta-category C)

<b>C.1 Sense-making through metaphor</b>	<i>'I held onto the songs, as if [...] it was a vine, as if it was a thread... like Ariadne's thread in the labyrinth' P1</i> <i>'I think each song is a doctor. A general practitioner [...] it can cure anything if I believe in it' P2</i>
<b>C.2 (Re-)orientation through the songs</b>	<i>'they're a guide when you get lost [...] you listen to the songs, you just catch them and they bring you [...] where you need to go, like inside your body, it's very introspective' P4</i> <i>"I come straight back [...] to the song, listen to the song, bring myself back to the song, ... because in the songs there are moments which help you [...] to regain a certain serenity, to find yourself back in your body' P6</i>
<b>C.3 Trusting and letting go</b>	<i>'every time they gave me confidence, also the sense that I didn't have to hold on, that I could stop controlling something' P1</i> <i>'when he sings that song I feel like there's nowhere I can go and hide so I have to... so [...] I have to just let go' P5</i>
<b>C.4 Stopping the thoughts</b>	<i>'... [it] let me let go of thinking...it's like the songs invade me... and so I don't think any more because [...] it's as if the song pushed out the thoughts.' P5</i> <i>'it was really stopping [my] mind and focussing my mind on the songs' P3.</i>



capacity to lead one away from danger. Bustos also relates her participants' 'holding onto the singing' (2008, p. 175) to Ariadne's thread; icaros being 'the link to this plane of reality and relationship' (*ibid*). Giove (secondary data) reinforces the icaros' importance in keeping participants present within the session: 'the icaro acts as a kind of nexus, a thread of connection with reality [...] because the patient can be very *mareado*, but if they're listening to the icaro, via this auditory link, they're in the session space, they're in the session time, and it prevents their spirit...their soul from travelling very far away'.

Other participants used metaphors evoking qualities of guidance, insight, teaching, or being saved by the songs. All participants noted qualities of guidance; according to P5 'the songs guide your mind [*l'esprit*] to this or that place, to this or that thing'. Qualities of guidance are noted in studies on psilocybin-assisted therapy by Belser et al. (2017), Kaelen et al. (2018), and in O'Callaghan's rapid review (2020). Giove comments that from the healer's viewpoint, 'the icaro

has a function of guiding, [...] of modulating the effects of the plant' (secondary data). The songs were also described as giving a necessary structural element to the ceremony 'the songs are structuring elements that put a skeleton, a frame [...] in the session' (P2). Dobkin de Rios described the function of music's structure during ayahuasca ASC as analogous to a climbing frame (a 'jungle gym' 1975, p. 68) which lets children climb and play within its boundaries. Music allows for the creation of form while playing with tempo, rhythm and melody phrases within the boundaries of temporality.

Two participants who described efforts to refocus their attention on listening to the icaros found that this improved their experience of the ritual (P3, P6). Focusing on the songs helped P6 to come back to the body when the effects of the ayahuasca became overwhelming or disorientating [C.2], and helped P1 and P3 to sit up. P3 and P5's experiences implied that this sustained or repeated focus [C.2] (in P5's case combined with the intensity of the song) helped them

## Sanango

**Voice**

Cura cu ra cuer pe ci to      sha mui ku naka ya ri ri ri ri      ri ri ri ri ri ri ri ri      ri ri ri ri ri ri ri ri      chi ri chi ri chi ri chi ri

Il lu mi na men te ci ta  
Il lu mi na espi ri tui ni  
Li be ra nos los mie di tos

**Chacapa**

fast, continuous shaking

chi ri chi ri chi ri chi ri      chi ri chi ri chi ri chi ri      chi ri chi ri chi ri chi ri      chi ri chi ri chi ri chi ri      sa nan go sa nan go sa nan go

Cura cura cuerpecito	Cure cure the body!
Illimuna mentecito	Illuminate the mind!
Ilumina espirituini	Illuminate the spirit!
Liberanos los mieditos	Liberate us from fears!
Enseñando valorcito	Teaching valor!
Enseñando dignidad	Teaching dignity!
Cuidanampa cuerpecito	Take care of the body!
Cuidanampa espirituini	Take care of the spirit!

Icaro of chiric sanango, transcribed from audio recording of Night X (approximate Western notation of an aurally-transmitted song). Jacques Mabit says this icaro was 'transmitted' to Takiwasi by maestro Don Solón Tello Lozano (1918 - 2010), a mestizo *curandero* from Iquitos (Torres, J., 1999). It is not known<sup>3</sup> whether the icaro was Don Tello's own or whether he received it from another mestizo or indigenous healer. Chiric sanango (*Brunfelsia grandiflora* D. Don) is a shrubby tree indigenous to the Amazon which is widely used in vegetalismo. It is understood to help fear, shyness and excessive self-absorption' (Bustos 2006) and to help with 'dreaming and remembering dreams' (Jauregui et al., 2011, p. 748).

Fig. 2. Icaro of the chiric sanango plant, transcription and lyrics



actively to face the experience of the ritual. Concentration on the songs enabled P6 and P4 to come back to the body in ways that felt necessary or centering to them in the moment. Overall, the experiences in [C.2] suggested songs helped participants to gain a sense of orientation within the ritual, find an anchor or point of focus through which to navigate experiences of the ASC, or be led towards helpful embodied or introspective states. A sense of release from some kind of restrictive holding onto or controlling something was also described [C.3].

P3 and P5 experienced their attention to the songs, combined with the effects of the ayahuasca, playing an active role in stopping or enabling them to move beyond their thoughts, [C.4]. In P3's case this seemed to be a move beyond negative or unhelpful self-talk: *'as I was focussing on the songs, I was stopping this kind of mental...repeated beliefs'*. What was described by P3 as stopping self-talk, was described by P5 in more active terms as an experience of increasing intensity involving both body [B.1.2] and mind [C.4], which led to the thoughts being *'pushed out'* of the mind. P5 thought that this experience may have happened during the singing of 'Sanango' (see Fig. 2).

P5 says that *'at a certain moment...it's like the songs penetrate you [...] if they go into your heart you can go and hide in your hand, or if they go into your stomach you can go and hide in your head... but when he sings that song I feel like there's nowhere I can go and hide so I have to just let go. It's like they go into everything' [...]* *'it takes you somewhere else.'* This experience ([B.1.2], [C.4]) supported Shannon's observation that icaros may 'engulf one in a quasi-physical

fashion' (2011, p7). P5 explains that it is particularly Jacques' songs which have this effect *'which let me let go of my thoughts, yes...because it's like the songs invade me...and so...I don't think any more because [...] it's as if the song pushed out the thoughts.'*

P3's experience in [C.4] seemed to suggest a connection with the psychology of rumination (Michl, L.C. et al., 2013; Watkins & Nolen-Hoeksema, 2014) whilst P5's experience suggested more of a link with the literature on mindfulness, meditative absorption and transcendent states (Berkovich-Ohana & Glicksohn, 2017). Both P5 and P3 expressed a sense of relief from habitual states or attitudes of mind; they welcomed the chance to leave behind their everyday mental states [C.4].

## D. Spiritual and religious experiences

The phenomenological experiences of songs and of TAM at Takiwasi were largely expressed as being connected with a mysterious or non-material aspect of reality described as spiritual, unseen, or divine [D.1], as shown in Table 4. This was broadly congruent with Takiwasi's own position on the centrality of spiritual aspects of healing in TAM (Dubbin Mabit & Politi, 2020). Many individuals' meaning-making about the functioning of songs demonstrated a sense or belief that mysterious, divine or unseen forces were at work in them. P6 commented that *'[the icaros are] the conductive thread which allows the shaman to [...] connect with the plant and then also to connect with spirits.'*

Various degrees of orientation towards Amazonian cosmology and aetiologies of healing were apparent amongst

Table 4. Data on spiritual and religious experiences (meta-category D)

<b>D.1 Songs coming from a mysterious / divine source</b>	<i>'like it was coming from an angel', 'like they are coming from another realm...very far away' P3</i>
<b>D.2 Sense of universal significance</b>	<i>'there was something universal that was not related to the language' P3</i> <i>'the effects are produced even beyond the understanding of the songs, so even the songs in Quechua...even if I don't know what they say, I know they're going to work anyway' P2</i> <i>'their action in the body and the mind goes beyond the rational' P2</i>
<b>D.3 Collective yet introspective</b>	<i>'There are moments when you can feel connected [...] it's nice ... [...] and there are moments when you can live through things individually as well [...] so it depends on the songs' P6</i> <i>'I had the impression that we were all together, all in the process of getting free of what was making us ill'. P1</i>
<b>D.4 Positive experiences of nature sounds</b>	<i>'the feeling of belonging, the feeling of being alive, of belonging to life' P5</i> <i>'the sounds are much more expressive, they're much more full of messages - as if the bird songs themselves were icaros' P2</i>

participants. For P6, perhaps relating a belief held prior to the retreat, the songs ‘grant us access to the spirits too...to marvellous spirits [...] the spirits of plants and of nature... and they also help us [...] to pass into this modified state of consciousness [...] to go into the world of spirits, get teachings there and come back’. P6’s comments show an affinity with Amazonian animic ontologies or beliefs of vegetalismo. They fit with descriptions of the spiritual functioning of icaros made by Favaron (2011) and Luna (2006), according to which icaros function as vehicles of mediation with a non-material or spiritual reality, perhaps reflecting P6’s extensive previous experience of TAM.

Experiences classed as ‘spiritual’ included a non-language dependent, universal sense of significance in the songs [D.2]; a sense of songs coming from another realm described as divine or angelic [D.1] (P3, P4); or believed (P6) to be connected

with a world of plant spirits. For P2, experiences in [D.4] applied to the auditory environment in general, not just to the songs, contributing to a meaningful experience in which all the sounds seemed to have a ‘grand design’: ‘the ayahuasca reveals a coherence, a harmony, an equilibrium between the different sonic elements [...], like a symphony’. Positive experiences of interconnectedness were felt in the ceremony and via the songs [D.3]. For some this feeling of collectivity coexisted with an introspective, personal aspect to the experience. The sounds of nature were experienced as positive and beneficial, engendering a sense of wellbeing, ‘being alive and belonging to life’ (P5) and wonder [D.4], evoking deep ecology, whose precepts emphasise ‘biocentric’ or ‘ecocentric’ equality’ and the interconnection of all life (Baker, 2015, p. 23).

Table 5 shows occurrences of the experiences described under the 4 meta-categories.

Table 5. Occurrences of song-related experiences

Participant	P1	P2	P3	P4	P5	P6
<b>A: Psycho-physical and psycho-emotional experiences</b>						
A.1 Helping to release negative energy & process emotions						
A.2 Feeling soothed and calmed						
A.3 Being moved to tears						
A.4 Feeling ‘supported’ ‘protected’ and ‘held’						
A.5 States of embodied emotion						
<b>B: Non-ordinary experience</b>						
B.1 Songs entering the body						
B.1.1 Extra-musical elements conveyed alongside songs						
B.2 Movements of songs						
B.3 Auditory-to-visual synaesthesia						
B.4 Perceptions of non-material phenomena						
B.5 Unwelcome experiences						
<b>C: Cognitive psychological experience and beyond</b>						
C.1 Sense-making through metaphor						
C.2 (Re-)orientation via the songs						
C.3 Trusting and letting go						
C.4 Stopping the thoughts						
<b>D: spiritual and religious experiences</b>						
D.1 Songs coming from a mysterious / divine source						
D.2 Sense of universal significance						
D.3 Collective yet introspective						
D.4 Positive experiences of nature sounds						



## CONCLUSION

This study contributes to the existing phenomenological literature on icaros/music & ayahuasca, adding to Bustos' phenomenology of icaros (2008, 2016). It outlines a more generalised set of experiences, identifying lived experience of icaros within interrelated domains. Participants found icaros to be essential to their experience of the ritual; the songs guided their experience and served as an orientating point of focus, helping them to navigate unpredictable and sometimes disorientating experiences of the ASC. Shannon asserts that music 'usually guides the visions' (2011, p. 10); findings here suggested songs provided psycho-sensorial orientation and other qualities of guidance.

Certain experiences seemed to support Amazonian emic aetiologies of healing, for example in the icaros' interaction with ('entering') the body, conveying welcome & latent extra-musical qualities, and being delivered with skilled intention [B.1]. Experiences of songs coming from a mysterious or divine source [D.1] echoed the Amazonian animic ontological position that icaros are tools of communication or connection with a spirit world, or non-material reality. Overall, icaros seemed to be experienced as mediators, vehicles or tools of therapeutic interaction between curandero and participant. Spiritual experiences seemed to contribute to a sense of meaning or connection with something greater than the self, as found by Loizaga-Velder (2014, p. 66), who assigned 'high therapeutic value' (*ibid*) to such effects.

Notwithstanding the areas of commonality set out in the results, experiences of icaros were highly individualised and unique, seeming to relate to the cultural and autobiographical background of participants, and to psychophysical health profiles. Unique effects, meanings and reflections were reported by each individual. Participants' meaning-making about the songs' function and personal impact was an active process often expressed through metaphor and in culturally-inflected ways, showing influence from participants' cultures of origin as well as Amazonian perspectives.

Findings invited comparisons with introspective and receptive forms of music therapy and forms of guided imagery and music such as the Bonny method of GIM, for example in relation to transpersonal experiences (Abrams, 2002, 2016), spiritual experiences (Blom, 2011), pivotal moments with emotional peak experiences (Fachner et al., 2019), and experiences of a transformational journey (Bunt, 2010). Data in [A.4] suggested that the lens of psychotherapeutic theories such as holding (Winnicott, 1960) and containment (Bion, 1962) could be applied to understand aspects of the practice.

Findings are relevant to music therapists and others interested in the use of music in psychedelic-assisted therapy (see Fachner, 2006; O'Callaghan, 2020). Although music-experience correlations were too loose to give detailed insights, this study builds on the work of Katz and Dobkin de Rios (1971), Shannon (2011) and Bustos (2008, 2016) to contribute to the phenomenological mapping of

musico-healing experiences with icaros under the effects of ayahuasca. Closer mapping between songs and experience could give more detailed insight into salutogenic processes, potentially at a neurophenomenological level.

Some results showed similarities to studies on experiences of music in psychedelic-assisted therapy (using psilocybin or LSD) such as Kaelen et al. (2018). Similarities were notably in themes of music's 'guidance' [C.2] and 'soothing and calming' [A.2] effects (Kaelen et al., 2018), in its supportive or 'holding' [A.4] effects (O'Callaghan, 2020), and in 'unwelcome' effects [B.5]. Category [C.2] on participants reorientating themselves via the songs, with its analogies of guidance, were similar to Kaelen et al.'s finding of 'guidance' as a feature of 'welcome experience' of music during psilocybin-assisted therapy (2018, p. 511). Songs' help with emotional processing [A.1] and facilitation of emotional expression [A.3] had similarities with effects of the music playlist in Watts et al.'s report on the same psilocybin study (2017). Similarities included the songs facilitating 'surrender to emotion' (Watts et al. 2017, p. 549), and [A.5], states of embodied emotion (2017, p. 540). Features of experience in [A.3] 'being moved to tears' were comparable to the concept of emotional breakthrough (Roseman et al., 2019). Findings concurred with Kaelen et al. (2018) in that music produced both welcome and unwelcome [B.5] experience, with welcome experience more prevalent.

Results are not generalisable due to methodology and sample size, however some previously unreported experiences are analysed for the first time in an interdisciplinary literature. Certain experiences seemed to have neurophenomenological implications. Whilst category [B.3] of auditory-to-visual synaesthesia-like experiences were congruent with effects noted by Shannon (2011, p. 286), the account detailed in P2's experience was novel, and along with [A.1], [A.5] and [C.4] may offer pointers towards possible psycho-neurobiological mechanisms or processes of healing with icaros and ayahuasca. Such experiences could be investigated in relation to Domínguez-Clavé et al.'s hypothesis about the psychobiological mechanisms through which ayahuasca may help to release trauma (2016, p. 97). P2's experience suggested songs and ASC providing a supportive function towards self-referential processing (Barrett Preller & Kaelen, 2018), and perhaps towards psychological processes such as decentering (Domínguez-Clavé et al., 2016) or attributes such as psychological flexibility (Kashdan & Rottenberg, 2010). Findings in [C.4], 'stopping the thoughts' suggested that listening to or focussing on the icaros played a role in breaking ruminative thought patterns (Michl, L. C. et al., 2013) and facilitating access to beneficial introspective or meditative states.

It is suggested that Western music therapy and psychedelic-assisted therapy may have much more to learn from a respectful enquiry into vegetalismo and other Amazonian musico-healing traditions. However, this suggestion comes with a warning that vegetalismo & other forms of TAM are traditions in their own right comprising proprietary specialised skills and proficiencies. Respect for the cultural and intellectual property rights of Amazonian indigenous



knowledge systems, for local ontologies and aetiologies of health and modes of apprenticeship, and regard to decolonial approaches should be primary considerations for anyone interested in further clinical research in this area.

## NOTES

1. Audio CDs of icaros sung by healers at Takiwasi can be purchased from the Center. At the time of writing, there is no publicly available audio archive or catalogue of icaros used at Takiwasi.
2. Ábrete corazón (Glove) is perhaps the most widely-known song in Takiwasi's repertoire; Dr Rosa Glove describes receiving it as one of a series of icaros (Takiwasi, 2021). It has become well-known internationally in New Age and neoshamanic circles, and has been recorded and reinterpreted by various artists (often without copyright acknowledgement).
3. Information not known by the Takiwasi Center; this may be known by other curanderos or contemporaries of Don Solón Tello.

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