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Research paper

Ayahuasca's entwined efficacy: An ethnographic study of ritual healing from 'addiction'

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ABSTRACT

Background: A range of studies has demonstrated the efficacy of the psychoactive Amazonian brew ayahuasca in addressing substance addiction. These have revealed that physiological and psychological mechanisms are deeply enmeshed. This article focuses on how interactive ritual contexts support the healing effort. The study of psychedelic-assisted treatments for addiction has much to gain from ethnographic analyses of healing experiences within the particular ecologies of use and care, where these interventions are rendered efficacious.
Methods: This is an ethnographically grounded, qualitative analysis of addiction-recovery experiences within ayahuasca rituals. It draws on long-term fieldwork and participant observation in ayahuasca communities, and in-depth, semi-structured interviews of participants with histories of substance misuse.
Results: Ayahuasca's efficacy in the treatment of addiction blends somatic, symbolic and collective dimensions. The layering of these effects, and the direction given to them through ritual, circumscribes the experience and provides tools to render it meaningful. Prevailing modes of evaluation are ill suited to account for the particular material and semiotic efficacy of complex interventions such as ayahuasca healing for addiction. The article argues that practices of care characteristic of the ritual spaces in which ayahuasca is collectively consumed, play a key therapeutic role.
Conclusion: The ritual use of ayahuasca stands in strong contrast to hegemonic understandings of addiction, paving new ground between the overstated difference between community and pharmacological interventions. The article concludes that fluid, adaptable forms of caregiving play a key role in the success of addiction recovery and that feeling part of a community has an important therapeutic potential.

Introduction

Clinical, biomedical and ethnographic studies suggest that the psychoactive Amazonian brew ayahuasca may be of promise in addressing substance dependence and other mental health issues such as anxiety or depression. Although, to date, no randomized controlled trial has ascertained efficacy against a placebo, a growing corpus of biomedical studies examining the pharmacological effects of ayahuasca, gives some credence to anthropological research that has long recorded its therapeutic uses in traditional settings. This raises an interesting question concerning the ability of existing biomedical approaches to fully understand the complexity of its therapeutic effects (Labate, dos Santos, Anderson, Mercante, & Barbosa, 2010; Tupper & Labate, 2014). In this article we contribute to this discussion by providing an ethnographically grounded, qualitative analysis of the experiences of people recovering from substance dependence with the ritual use of ayahuasca.

Ayahuasca is an herbal brew, most commonly comprising of a mix of the native Amazonian *Banisteriopsis caapi* vine and leaves of the *Psychotria viridis* shrub. It is widely used in an array of shamanic ritual and healing practices in the Western Amazon. Over the course of the twentieth century, ayahuasca was integrated into a range of syncretic Christian, Spiritist and Afro-descendent religious practices, giving rise – in Brazil – to three religions: Santo Daime, União do Vegetal and Barquinha (Labate & MacRae, 2010). These spread alongside neoshamanic uses to Latin American urban centres and were subsequently 'globalized' (Tupper, 2008).

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In this process, ayahuasca was transformed, so to speak, to fulfil new and distinct therapeutic objectives (Labate & Cavnar, 2014a, 2014b). New ceremonialized (Barbira Freedman, 2014) ritual ayahuasca forms emerged, which sought to harness and manage the powerfully evocative, visionary and emetic experience to a range of therapeutic ends. This article critically examines the biomedical concept of addiction in relation to the way these ayahuasca healing practices take shape in structured, interactive ritual contexts.

The existing literature on ayahuasca and addiction shows that physiological and psychological mechanisms are deeply enmeshed. Our argument is that we need to add to this important body of work, a sustained and detailed ethnographic analysis of people's experience of addiction healing in therapeutic and ritual contexts where ayahuasca is rendered efficacious. We argue that psychedelic substances such as ayahuasca are very peculiar pharmacological tools whose value needs to be made sense of within specific ecologies of use and care that are not yet easily comprehensible within the biomedical paradigm. Our review of biomedical accounts of ayahuasca and psychedelic treatments of addiction, points to a zone of encounter or 'cleavage' between neuroscience and cultural critique (Wilson, 2015). When assessing the use of ayahuasca treatments for addiction, the risk is that addiction is taken for granted as primarily a biological problem, and that emphasis is placed mainly on the pharmacological efficacy of ayahuasca. There is indeed a lot to know about the pharmacokinetics of ayahuasca and its possible mechanisms of action. However, we argue that these effects can only be rendered fully meaningful within certain settings. Our ethnographic data point to some key extra-pharmacological elements that we believe need to be assessed in equal measure to pharmacological mechanisms. We argue that the efficacy of such treatments cannot be reduced to *either* the pharmacological effect of ayahuasca *or* the ritual. Indeed one without the other is very unlikely to be effective at all. Our goal is to pave some further ground towards accounting for the potent interfusion of these distinct elements.

Addiction, and addiction recovery, cannot be taken as simple medical facts (Garriott & Raikhel, 2015). Addiction therapeutics typically frame rehabilitation and recovery in terms of managing addiction, rather than 'curing' or overcoming it (Raikhel & Garriott, 2013, p. 25). Terms such as rehabilitation or recovery lack specificity, blurring different understandings and goals of addiction therapeutics (Kaskutas et al., 2014). They assume a somewhat linear trajectory out of addiction. We present ethnographic research examining people's healing experiences, that is, their attempts to heal substance use that they see as problematic. We use the term '*curar*' (to cure or heal) to signify a process that involves more than abstinence. It may, for example, involve a re-scripting of the past or a radical transformation of people's understanding and experience of substance use.

Methods: situating our study

We focus on the recovery trajectories of people diagnosed as 'addicted' who find support within regular ayahuasca churches or spiritual groups. Most of the literature on ayahuasca treatment for addiction draws on studies in dedicated treatment centres or using healing protocols specifically adapted to people with substance dependence (Labate & Cavnar, 2014a; Labate et al., 2010; Loizaga-Velder & Verres, 2014; Mabit & Martin, 2007; Thomas, Lucas, Capler, Tupper, & Martin, 2013). With few exceptions, such studies do not provide ethnographic, qualitative analyses of people's processes of *cura*. We draw on observations and interviews with ritual experts and participants who give or receive support within the context of ayahuasca ritual practice. These are structured ritual spaces whose purpose and function span well beyond healing (see Labate and Cavnar (2014b), Labate and Jungaberle (2011) and Labate and Macrae (2010)). While they are not explicitly promoted as healing spaces, participants may be drawn to them because they have heard of the therapeutic benefits attributed to ayahuasca.

The multisited ethnographic research on which this article is based was carried out among Italian chapters of the Santo Daime church and among urban Brazilian spiritual communities that emerged from, but have broken with, the original ayahuasca religions. The research was conducted within the context of the European Research Council-funded ChemicalYouth Advanced Grant program (ERC-2012-AdvG-323646). The program utilizes research methods from medical anthropology and science and technology studies to explore the lived effects and pragmatic regimes of use of chemical and pharmaceutical use from the perspective of users themselves. Methodologically, the research draws on in-depth narrative interviews exploring the beliefs and expectations surrounding drug use and practical experimentation, and on ethnographic research using long-term fieldwork and participant observation with ayahuasca communities.

The bulk of the research was conducted in 2015, using semi-structured, in-depth interviews and participant observation of ayahuasca rituals in Italy and Brazil where the ritual use of ayahuasca is not illegal (Labate & Feeney, 2012; Menozzi, 2011). The narratives of seven Italian people who overcame substance dependence (on heroin, cocaine, crack, methadone, alcohol, tobacco and antidepressants) through the ritual use of Daime (the name given to ayahuasca in the Santo Daime church) were collected, recorded, transcribed and systematically analysed. In-depth interviews were conducted with ritual experts, and with a physician and a psychologist working at a public centre for addiction treatment. Finally, in-depth interviews were also conducted with community members responsible for 'holding space' during ayahuasca rituals; these individuals spoke about witnessing the recovery processes of people struggling with addiction or about their own recovery. Research was also informed by participation in community events outside ritual time (collective meals, formal and informal gatherings, and partaking in the daily activities of people who work with ayahuasca and who, in some cases, are longstanding acquaintances). Our analysis further draws on scientific and policy documents pertaining to the therapeutic potential of ayahuasca.

Based on the rituals we observed, ceremonies involving ayahuasca tend to be performed after dark, and participants are invited to wear white clothing. New participants are introduced to the ritual after contact and screening have been carried out by the group's leadership. A person wishing to participate is asked to not use any drugs for several days before the session (including not using methadone if the person is struggling with opioid addiction). Ayahuasca doses are adapted to suit each person and carefully evaluated on a case-by-case basis. Inside the large *salão* (ritual space), chairs are positioned around a central table on which ritual objects have been carefully positioned, including flowers, candles and icons. To one side, a table covered with a white cloth is set up, from which the ayahuasca brew or Daime sacrament is served. Designated helpers assist each participant to their place, and 'hold the space', tending to practical matters and providing assistance where needed. The ritual begins with prayers, songs or hymns that open a *trabalho* (ritual 'work') which will last four to six hours.

The healing that we present here emerges out of a loose assemblage of empirical, case-by-case assessments within structured networks of support. This gives the ritual space an iterative and reflexive dimension, thereby enabling a form of care that is attentive to the specificity of different situations and contexts. This contrasts, in our informants' perspectives and narratives, with the highly structured approaches that characterize standard

addiction-treatment programmes. The practices of care and networks of support that are provided in and around the regular ritual practices of the ayahuasca religious groups we study do not assume to know addiction in some generalizable way. If anything they bring about an increased awareness of the specificity of each situation, of each person's particular circumstances.

Biomedical understandings of psychedelics' efficacy in addiction treatment

There is a growing body of literature on the therapeutic potential of psychedelic substances such as ayahuasca that examines the various physiological and psychotherapeutic mechanisms that make these substances effective in addressing substance dependence. Classic psychedelic substances (in particular 5HT2A agonists such as LSD and psilocybin) were widely studied for their potential as addiction treatments from the 1950s through the 1970s (Halpern, 2009; Krebs & Johansen, 2012; Kurland et al., 2009; Sanches et al., 2016). Oram (2014) shows that the US 1962 Drug Amendment Act instituted the randomized-controlled trial (RCT) as the gold standard for evaluating the efficacy of biomedical interventions. This standard was not transferable, however, to the complex LSD-assisted psychotherapeutic interventions that researchers were developing to treat addiction. The RCT placed all the emphasis on the substance at the expense of the context, and carried an assumption that drug therapies 'worked through a direct biological action' (Oram, 2014, p. 224). This raised difficulties for LSD psychotherapists whose interventions were neither purely pharmaceutical nor solely psychotherapeutic (Dyke, 2008). While they are held to the same formal requirements as other psychopharmaceutical drug trials, psychedelic researchers are careful to differentiate their studies and claims to efficacy. What these trials test is not a drug alone, but a drug-assisted psychotherapeutic intervention. This requires meticulous labour, translation and adaptation of existing clinical trial protocols that are designed to study drug efficacy by purifying out the context and subjective experience of patients. In this sense, psychedelic biomedical studies require a reinvention of trial protocols to account for the synergistic efficacy of pharmaceutically assisted therapeutic interventions.

The perceived limited efficacy of existing approaches to treating substance dependence has brought about renewed interest in the potential of psychedelics (Frecska, Bokor, & Winkelman, 2016; Johnson, Garcia-Romeu, Cosimano, & Griffiths, 2014; Sessa & Johnson, 2015; Thomas et al., 2013; Tupper, Wood, Yensen, Johnson, Wood, 2015). Psychedelic-assisted therapeutic approaches to substance dependence make use of a limited number of controlled and supervised 'dosing' sessions (in contrast with substitution approaches, which are unsupervised and chronic). Publications reporting on these studies note that this targeted approach can lead to lasting changes.

Longitudinal case-control studies reveal that members of ayahuasca religious groups have fewer cases of alcoholism than control groups which suggests that consuming ayahuasca is a favourable factor for reducing addictive behaviour (Doering-Silveira et al., 2005; Halpern, Sherwood, Passie, Blackwell, & Ruttenber, 2008). Ayahuasca's 'antiaddictive' properties are thought to arise from its action on dopaminergic and serotonergic mesolimbic pathways (Prickett & Liester, 2014). Published studies such as this one suggest that the brew increases neuroplasticity, facilitates adaptive neural architectural changes, and breaks down pathological associations, triggers and cues associated with addiction (2014, p. 120). Ayahuasca is thought to increase 5-HT levels, attenuating withdrawal symptoms associated with the cessation of cocaine or heroin use. DMT, one of the active components of ayahuasca, is also thought to exert anxiolytic effects through 5-HT1A receptor agonism (Jacob & Presti, 2005). The central nervous system effects of ayahuasca are thought to involve a reduction in the activity of the Default Mode Network, which is also reduced in meditative states (Palhano-Fontes et al., 2015).

The therapeutic potential of these neural changes includes the possibility of greater integration of different cerebral networks, leading to increased somatic awareness and subjective feelings. This is thought to produce 'a state of heightened suggestibility because of the suspension of the frontal networks that are typically used to maintain control over mental processes', enabling repressed memories to resurface (Frecska et al., 2016). The strong serotonergic effects of ayahuasca are understood to mitigate retraumatization by such emotional resurfacing. Frecska et al. (2016) consider that this provides a unique situation enabling access to a previously unavailable, corrective aspect of the emotional pattern. Ayahuasca states have been shown to enable recovered addicts to work through traumatic events by providing fresh perspectives on one's patterns, such as those leading to addictive behaviours (Bouso & Riba, 2014; Fernández & Fábregas, 2014; Loizaga-Velder & Verres, 2014).

We present such studies to outline the particular way in which claims concerning ayahuasca's efficacy are being constructed: researchers use neuroimaging, psychometric evaluations and clinical investigations into the relations between biomarkers and subjective responses to psychedelic-assisted therapeutic interventions. Such studies are important within the current knowledge economy, but are only valid, in our view, within their own terms of reference. In the next section, we suggest that one of the conceptual challenges such studies face is making sense of the complex, dynamic and amplified efficacy of psychedelic-assisted interventions within an epistemology that presumes a radical distinction between the 'pharmaceutical' and the 'social'. Within such an epistemology, it becomes difficult to account for the specific, situated and contextual efficacy that healers witness and patients experience.

The material-semiotic efficacies of ayahuasca

Loizaga-Velder and Verres (2014) argue that ayahuasca must not be understood as a pharmacological intervention. Clinical attempts to isolate pharmacological from ritual efficacy are 'never free of their own effects on the subject of the study', as Labate et al. (2010, p. 218) have noted. Likewise, Tupper (2008) shows that contemporary ayahuasca drinking practices are framed by a global drug policy regime predicated on scientific materialism, which explains drug efficacy solely by reference to biochemistry and psychopharmacology. This is a key point that we wish to develop further in this article. Loizaga-Velder and Verres refer to ayahuasca as a therapeutic 'catalyst' whose value is dependent on the experience being appropriately managed and integrated through trained guidance that helps direct the psychological dynamics. We review the potential of structured ceremony in providing such support, calling attention to the shared meaning that is constructed through collective ritual participation.

Feminist philosopher Wilson (2015) advocates transcending approaches that focus on *either* pharmacology *or* meaning response, and the other dichotomies that still plague our understandings of pharmaceuticals and drugs. Our goal is to reveal how – in the contexts we studied – the pharmacology of ayahuasca, its rich semiotic worlds and the thick relational fabric within which it is used, produce a uniquely potent and deeply caring, situated efficacy. Drawing on Wilson's insights we ask about the serotonergic effects of rituals that are afforded to individuals seeking support in their recovery trajectories. This approach invites us to embark on conceptual and empirical work that does not replicate existing distinctions within social studies of healing

between mind and body, pharmacology and culture, etc. that serve little in elucidating the complex intertwined trajectories of healing.

Weinberg (2002, 2013) argues that existing studies of addiction tend to analyse addiction either in neurobiological or cognitivist terms. Yet, as has been argued regarding the importance of pleasure in drug consumption (Duff, 2015, 2008), the experience of drug use is never reducible to 'isolated biological effects of drugs in the brain' but is always in interaction with emotions, music and space; forming 'fluid gestalts that cannot be experientially disaggregated' (Weinberg, 2013, p. 179). Likewise, writing on how agency is attributed to either the social structure within which problem drug use emerges, or to the agency of the substance that purportedly addicts, Duff (2015) argues that it is necessary to move past the ontological separation of individuals from social contexts, and past the differentiation of drug objects from cultural practices of consumption that plague drug policy (see also Bourgois (2000)).

We adapt this argument here, drawing on material-semiotic analyses of how drugs are made to matter and rendered efficacious (Barry, 2005; Gomart, 2002; Sanabria, 2016), to consider how ayahuasca can catalyse cathartic transformations under certain conditions (Menozzi, 2011). The scripting of the experience – the way the effects of ayahuasca can be made to concretize lasting changes under adequate guidance – is a process that challenges existing conceptual vocabularies for the effects of interventions, which, as we have seen, tend to ascribe efficacy to either substance or context. This is perhaps particularly true in the case of ayahuasca ritual ceremonies, where various forces – from the materiality of music (Kaelen et al., 2015) to the evocative symbolism, to the more-than-human forces that may be encountered – invite us to ask not 'what acts' but 'what occurs', (Gomart & Hennion, 1999). The significant effects that 'what occurs' can have is captured in the following extract from an interview with Carlo, one of our informants:

> Even just simply on a physical level, the craving symptoms that you have when you stop the methadone are improved by the Daime [Ayahuasca]. You feel good for 24 hours and this allows you to prorate a lot of methadone in just a few days. In the days after a *trabalho* [ritual work], it requires much less effort to reduce the methadone; you can halve the methadone dose in a few days. The stronger the *trabalho* is, the easier it is. [. . .] When the work is strong, the Ayahuasca has this pharmacological effect and improves your condition.

In this person's experience, the intensity of the ritual directly affects the experience of withdrawal, making it more manageable. Francesco, who had a long career as a drug user and as a successful musician, described his first experience of ayahuasca. He uses terms that mingle the biological and the symbolic, a description perhaps shaped by his religious background:

> I was asked to try not to take drugs for at least twelve hours before the ceremony. I was in the train with my heart beating, the withdrawal symptoms beginning, emotions, nervousness. This is what the 'medicine of the forest' [Ayahuasca] found when it came into my body. I was sweating and shaking. They put me in the shower, they gave me a pair of white pants. I sat there with all my prejudices: 'Who are these people?' Then I let myself go, I said, 'okay, let's try'. After fifteen minutes I see this strange light in the centre of the table, after twenty minutes it became a lighthouse and then the rest is something completely indescribable. The incredible result is that since that day, almost five years ago, I have only taken two painkillers for back pain. No other drugs whatsoever. [. . .] The strongest feeling I can describe is that I didn't understand anything, but it was like being washed from the inside with Christ's tears, I say it in the religious sense. Like transparent water, or blood, or something that cleanses. I felt sanded from the inside. In fact, in my opinion it didn't remove the effects of abstinence, but reset my body and capacity to feel, so much that it simply cancelled the craving. [. . .] The Daime reset all my sensations, it washed and cleaned the receptors from all the substances I abused. [. . .] The Daime completely erases the desire of the body and the mind. The body doesn't want it [heroin] anymore. Even when I felt the desire, the idea, then I felt a sensation of nausea, a poisoning. Then, in the following months there isn't only the physical care or social re-education, there is also a resolution of the deepest suffering, the questions of life, which are the ones that you carry forever.

Brazilian anthropologist Mercante (2013) writes of addiction curing with ayahuasca as a long process of social reintegration. Ayahuasca rituals enable a 'directioning' of the effects of the brew; they circumscribe a field of possibilities, containing the experience and providing tools to render it meaningful. This process blends the somatic, symbolic and collective dimensions of the experience. The layering of effects is what makes such interventions so powerfully cathartic and catalytic– for those who experience them. A particularly illustrative aspect of this material-semiotic dimension of the efficacy of the interventions we are describing, concerns the issue of purging in the issue of purging in ayahuasca ceremonies. The term '*limpeza*' (purge or cleanse) used in ayahuasca rituals in Brazil and Italy collapses the material and symbolic domains.

Wagner, who has been officiating ayahuasca ceremonies within the Santo Daime tradition for several decades, explains purging as a deeply psychosomatic process: 'people are expelling attachments, behaviours or negative emotions through the catharsis of the body'. Marco is forty-five years old and began using cocaine and heroin at the age of twenty-two. After several attempts he realized he could not stop and began using methadone until 2007, when he had his first experience with Daime and stopped using drugs altogether:

> At that time I used to take methadone in syrup. I was very intoxicated and very ill, physically. This session took place over two days. The first day was a real ordeal, I felt that I had to throw up, but I couldn't and so I was in this limbo. I had no revelations, it was just suffering, and after the first day I wanted to go home. 'If you stay you might have a chance of opening to something new. If you leave, you know exactly what will happen', someone told me. So I stayed. The next day, the Ayahuasca was much more gentle with me and I was able to purge. I threw up things that I never saw again, they were like black snakes or worms. I had the feeling I was vomiting something psychic or spiritual. There was this material support, but it was connected to something else. I don't know exactly what happened, but in the days after I was deeply relieved. It was as if a black cloak that enveloped me and all my perceptions had suddenly been removed, and so many new things could receive light. Suddenly this cloth had been removed and I could breathe.

This cleansing process can take different forms, including the catharsis brought about by the flow of tears. For example, Antonia explains: 'I didn't have visions and I did not vomit. Instead, I started crying thankful tears. There was only peace and my palpitations stopped. For a person overburdened with guilt, it was an extraordinary event'. Francesco explains that ayahuasca helped him gain a clearer experience of his body: 'What I can eat, or not. I received from my use of Daime, a method of caring for my body. Daime cleans'. Roberto, a long-term heroin user who was in and out of addiction treatment for many years, reports that while the congregation was singing, at the height of a ritual, he had a vision of himself journeying at great speed inside a tunnel:

> I had often asked myself how the twenty years of drug use had modified my physical and mental conditions. How would I be if I

had not taken so many drugs? While they were singing I felt a turmoil inside myself. I felt like my fifteen-year old self again. I entered a tunnel and no longer felt my body. In the tunnel I began to smell all the scents, to feel all the effects and taste all the drugs I ever used. I tasted everything, all the heroin and all the cocaine. Heroin, as it was when I started, is not the same as today's heroin. In all this time heroin, and its quality, changed many times, it was grey, then beige, then yellowish, then white. I felt the effect of each change. This experience was so strong for me. When the effects of the vision faded, I felt like a young boy again with the joie de vivre of a young boy. I was happy in my heart and I began to smile. I entered the ritual depressed and came out very happy. I felt better and my eyes were shining. Ayahuasca had wiped everything clean and I felt like a new person, just as if I had never used drugs in my soul, in my body, in the wholeness of myself.

A few days later he had a relapse and took heroin again. Doing so, however, did not lead him back down the same process of addiction. He explains that this relapse enabled him to realize that he did not have the same attachment to heroin: 'I needed to understand how disgusting heroin is. I experienced the clear difference between dirty and clean, and realized that I didn't want heroin any more'.

Wilson's (2015) analysis of the somatic entanglement of affects reminds us that these are always heavily modulated by social, suggestive, spatial, placebo, material, cultural, symbolic and semiotic events. She notes that 95% of the body's serotonin is found in the neural networks that innervate the gut (Wilson, 2015, p. 66). Perhaps it is not surprising then that the gut, through the central practice of purging evoked above, is so involved in ayahuasca experiences that pharmacological studies so consistently associate with the serotenergic mesolimbic pathways. This imbrication of the mental and enterological upends distinctions between the gut and mood, between vomiting and emotion: 'The vicissitudes of ingestion and vomiting are complex thinking enacted organically' (Wilson, 2015, p. 63).

Ayahuasca reconfigures addiction, and our understandings of it

Much of the literature on ayahuasca treatment for addiction does not critically engage with the notion of addiction itself, taking it relatively for granted. This can be understood as a strategic requirement for ascertaining the validity of this treatment modality within biomedical frameworks and conceptualizations of addiction. Yet, as social theories of addiction have shown, addiction is a complex, enmeshed and biosocial process (Garriott & Raikhel, 2015). There are many addictions (Bourgois, 2002; Campbell & Lovell, 2012; Netherland & Hansen, 2016). In our ethnography, which took place entirely outside of specialized addiction treatment centres, we seldom encountered the term 'addiction'. People we met within the ayahuasca traditions spoke instead of healing problems of *dependência* (being dependent, a non-biomedical idiom) or, less commonly, of *vicio* (depravity, to have an immoral habit). Drawing on their narratives, we aim to pave further ground, beyond 'denaturalizing' addiction as a disease (Garriott & Raikhel, 2013). Our suggestion is that ayahuasca can, in certain instances, reconfigure the very meaning and experience of addiction, beyond its medical acceptation as life on the verge of perpetual relapse (Campbell, 2013). The people we encountered had, for the most part, undergone standard addiction treatments, which they often experienced as highly normative and, at times, coercive. They spoke of these standard treatments as providing tools to manage rather than recover from their addictive patterns.

Ayahuasca is no magic bullet. What is clear in our informants' narratives, is that the substance does not bring about healing alone. For example Francesco had previously used peyote, which is also known to be effective in treating addiction, but doing so had not brought about recovery from his heroin addiction. He explained this was because: 'I used it as a *drug*', that is without therapeutic intention. What our findings make clear is that it takes more than drinking ayahuasca for durable changes to take place. While ayahuasca may – pharmacologically speaking – facilitate such changes, these are rendered effective in the longer term within certain contexts and collective structures that enable a reconfiguration of one's self understanding and insights into one's addictive patterns. Marco spoke of such patterns as 'loops':

Methadone was part of the loop. For two to three months I used to smoke heroin, then take methadone. Psychologically and spiritually the deeper issues were never addressed. The roots of the problem were still there. It was always a matter of time, an opportunity to restart the loop. I have done fifteen or twenty of these loops, each lasting from two to four months, with more or less the same characteristics. I always felt wrong in what I was doing. That it wasn't right. [. . .] With Ayahuasca, I had this view from the top. I saw how everything was part of the loop of addiction. [. . .] The Daime showed me how these forces of addiction act. I talk about it as if they are conscious, because that's how I perceive them. These forces aren't interested so much in the substance, but to what we bring out when we are addicted to something. If you take away their support they find other supports, and in the world in which we live now there can be so many different supports. People who haven't had problems with substances are dependent on a lot of other things, unaware that these things are a support for these forces of addiction to act in them. These destructive effects may not be as striking as with heroin, perhaps. But addiction can prove harmful in many more ways.

One of our team, Talin, had the opportunity to meet two interviewees (Roberto and Carlo), several months after their first extended interview. A collective discussion took place during a Santo Daime event and included a psychiatrist who had treated Roberto in a residential addiction treatment centre in Italy. The doctor qualified methadone as 'a wonderful medicine that corrects the abstinence from heroin' but recognized that it was also highly addictive, making it – in her words – more 'insidious' than heroin. Reflecting back on Roberto's experience, and his many relapses, she recognized that the clinic's approach had not worked well for him. Given what a difficult case he had been, she stated that she was stunned by how effective ayahuasca had been in his recovery process. Roberto replied:

I tried to decrease the methadone. The clinic's prescription was 140 mg of methadone for several years, and then maybe I could decrease it to 80. For the clinic, there was no problem in taking methadone for the rest of my life. But methadone is as much an enslavement as any heroin addiction. I could not abide by the rules of the residential program because they detracted [*sic*] me from my will to recover. In the residential program you can't do what you want. They are always controlling you, everywhere, even in the bedrooms. The Santo Daime community where I lived for some time is not a community for addiction treatment, with gates and closed doors, doors with no handles, to stop people getting out at night. There are no prohibitions on meeting with others. The clinic is like a prison. Yes, you choose to go into a residential program, but often it isn't really a choice, because when you arrive, you've hit rock bottom, you are forced to go to such a place. In the Daime community, the rules are self-imposed by the community members. There is a lot of freedom, and I thrived in that freedom. It is a healthy place. It's only 15 km from a big city with one of Italy's largest drug markets and I never once went there to buy cocaine or heroin. I didn't feel the

need nor the desire for the drugs. It was fully my choice to be there. I think that is essential for the quality of recovery.

The people we encountered in our research often had come to ayahuasca rituals after unsuccessful attempts to recover through outpatient clinics or psychiatric residential centres. Most of our interviewees felt out of place in such centres, where they felt stigmatized as socially dysfunctional 'junkies'. One of our informants joked that in the centre through which he had regularly transited he was told he was an 'atypical addict', highlighting the implicit normative construct the institution holds of a 'normal' addict. Further, our informants noted that such institutions tend to normalize certain kinds of drugs over others. While they navigated through their recoveries, using ayahuasca to titrate off their substitution treatments for example, they were told that ayahuasca was a 'drug' while at the same time being prescribed heavy doses of methadone or psychiatric medications, which several interviewees highlighted as deeply paradoxical. Rance and Treloar (2015) argue that the 'credibility deficit' that users of addiction services experience – being treated as incapable of making decisions – can have profoundly dehumanizing effects. By contrast, feeling acknowledged enables service users 'to redress their disenfranchisement, not only from the discursive economy of the treatment setting but their membership of the human community' (Rance & Treloar, 2015, p. 35).

Attending to specificity: *dependência* healing as care

For the people we encountered, feeling part of a community is a key aspect of the healing experience. This brings us to the final section of this article in which we examine the potential of fluid and adaptable ritual forms as unique forms of caregiving. There is a phenomenal variety of patterns according to which people use drugs and sometimes develop problems (Weinberg, 2013, p. 179). Yet, what transpires from our informants' narratives is that addiction treatment institutions are rarely able to attend to the specificities of people's particular drug use predicaments. In contrast, care practices in the spaces where ayahuasca is ritually used are often tailored and dynamic. We provide a brief ethnographic description of these practices in order to shed light on their potential therapeutic importance.

During the ritual process itself there are highly structured forms of caregiving in which dedicated 'helpers' are responsible for attending to the needs of participants. They are specially trained to provide non-invasive supervision of the experience in order to allow each participant to safely experience his or her cathartic process. Their role is characterized by minimal physical and verbal contact, but they remain at hand to help should it be needed (such as providing a place to rest, some water, a tissue or a place to purge). Ritual leaders pay great attention to how such care is provided, so that it is neither intrusive nor neglectful. In the spaces we observed there are slightly different understandings of what constitutes good care during the ritual itself: in the Santo Daime tradition, it is usually considered best to intervene as little as possible in people's process, because it is difficult to know much about the process unfolding internally for someone, and cutting this short might impede its full completion. The neo-ayahuasca healing ceremonies observed in Brazil generally share this understanding but often include specific therapeutic interventions, such as the use of somatic or 'energy' techniques, aromatherapy or spiritual interventions. Such ceremonies at times make use of a dedicated 'healing room' adjacent to the main ritual space, where those in need can be attended to by specialist healers. For many we interviewed, the experience of partaking in a collective process of this nature, of receiving this kind of non-directive care, was, in and of itself, deeply transformative.

The conducting of the ritual itself is iterative, as ritual leaders are highly attuned to what is happening in the congregation, and are able to adapt and respond accordingly. For example, if during a ritual someone has a difficult experience, a specific hymn may be 'activated'. As one Santo Daime leader explained, the hymns have 'vibrational influences that connect people with their own powerful mechanism of self-healing'. While rituals are highly structured, there is also space to adjust to what is unfolding.

Care practices bridge ritual time and everyday life. In the rituals we observed, the *trabalho* is always brought to a close with an informal, joyful gathering. Food and hot beverages are shared and people have an occasion to discuss their experiences or simply socialize. These are moments in which a difficult or particularly powerful experience may be reviewed with more experienced members, and newcomers are carefully, if discreetly, monitored. This is a time of exchange regarding the collective experience, one that creates a space of community and relationality that spills over into everyday sociality and interactions (including in the virtual social networks and digital spaces that are increasingly important sites of socialization outside ritual time). Participation and belonging to a religious or spiritual community is an essential part of the healing process, a 'laboratory where you put into practice the learning received in the rituals', as one Santo Daime leader put it. Elsewhere, Talin (2012) has argued that a sense of belonging is generated through the collective labour of preparing and participating in ritual, and this, together with the sharing of ayahuasca, work to produce a sense of 'spiritual kinship'. Within the Santo Daime doctrine, and more generally among ayahuasca church congregations, the community is referred to with the kinship term '*irmandade*' (brotherhood), evocative of the intimate nature of the ties and mutual obligations created in such contexts.

This brings us to reflect on what 'good care' could mean in the treatment of addiction. Mol, Moser, and Pols (2010, p. 14) define good care as a 'persistent tinkering in a world full of complex ambivalence and shifting tensions'. Their point is that care is fundamentally contextual. The theoretical concern with care is itself a method: it requires a sustained detailed ethnographic attention to the subtleties of caring. Such practices are necessarily local, responsive and heterogeneous, bringing together complexities and frictions that resist universal principles. The practice-based approach advocated by Mol and colleagues emphasizes the reflexive and experimental nature of care that involves 'persistent tinkering', making care a perpetual endeavour, one that is never finished, always in the making. Such tinkering blurs the boundaries of the objects configured through care. It is our suggestion that the tinkering that operates in ayahuasca rituals reconfigures (for the people experiencing healing) the notion and contours of what addiction is. We argue that it is precisely by making these normative contours unstable, by caring differently, that such ayahuasca rituals can come to be experienced as effective.

Conclusion

> . . . every question about 'Ayahuasca' should be modified into a question about 'the use of Ayahuasca', a notion that combines how the substance's potentials are oriented, guided, and controlled by a certain type of use. (Mabit interview in Labate and Jungaberle (2011), p. 230)

It has been suggested that given the limited efficacy of existing addiction treatment modalities and the scale of the problem, allowing the guided use of psychedelic substances for the

treatment of drug dependence may be an ethical responsibility (Halpern et al., 2008; Winkelman, 2014). Fraser (2015) has shown that alcohol and drug addiction experts and policy makers generally do not conceive of addiction as a unitary coherent disease that can be readily addressed by narrowly conceived medical responses; nevertheless, such ideas endure and continue to garner support in the absence of strategic alternatives.

To be clear, we are not advocating that all people struggling with addiction should use ayahuasca. Our goal is rather to shed light on an existing practice of addressing substance dependence that demonstrates a very different understanding of how substances act: from producing determined effects to opening up a space to reconfigure one's understanding and experience of 'addiction'. The ritual use of ayahuasca described here offers a window into one possible 'heterotopia' (Foucault, 1984), that is, a space of variance in the face of hegemonic spaces of treatment. The ritual use of ayahuasca that we have summarily described here partakes in a much needed reconfiguration of standard understandings of addiction (Alexander, 2010; Garriott & Raikhel, 2015; Weinberg, 2013). Drawing into dialogue the social studies of addiction and biomedical and anthropological studies of ayahuasca, we have sought to illuminate emergent forms of practice that are gaining momentum in Latin America and Europe, and providing new frames through which people can experience recovery and reframe their understandings of addiction.

Through our attention to the entwined efficacy of ayahuasca in addressing substance dependence, we wish to show that the current framing of what can count as evidence precludes demonstrations of efficacy for interventions that cannot be measured in standardized ways, or in Duke and Thom's (2014, p. 969) words, that 'do not have causal powers in themselves'. Despite accumulating evidence in support of complex, ecologically validated interventions, a very specific rendering and weighting of evidence has come to predominate under the paradigm of evidence-based medicine: one that positions the RCT at the pinnacle of the evidence pyramid and relegates case reporting – which is how ethnographic evidence is often perceived – to its bottom (Brives, Marcis, & Sanabria, 2016). This brings up a key question concerning the role of different forms of evidence in drug policy. In presenting the situated, specific and iterative dimensions of care practiced in ritual settings, our aim is to show that standardization according to universal or externally determined norms can inhibit the potential of such rituals to respond dynamically to what a situation requires. Supporting such a dynamic of care and making it legible within current evidentiary norms presents a considerable challenge. It invites us to collectively move beyond a discussion about whether or not psychedelic-assisted interventions are effective in the treatment of addiction, and to ask instead for whom and under what conditions they can be.

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Conflict of interest

The authors declare that they have no competing interests, either intellectual or financial, in the research detailed in the manuscript.

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