



# Ritualized Peyote Use Can Facilitate Mental Health, Social Solidarity, and Cultural Survival: A Case Study of the Religious and Mystical Experiences in the Wixárika People of the Sierra Madre Occidental

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Ritualized Peyote Use Can Facilitate Mental Health, Social Solidarity, and Cultural  
Survival: A Case Study of the Religious and Mystical Experiences in the Wixárika  
People of the Sierra Madre Occidental

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A Thesis in the Field of Religion  
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## Abstract

This paper examines how the Wixárika, or Huichol, as they are more commonly known to the outside world, have successfully engaged in a decade-long struggle to save their ceremonial homeland of Wirikuta. They have fended off a Canadian silver mining company's attempts to dig mines in the habitat of their most important sacrament, peyote, using a remarkable combination of traditional and modern resistance techniques. This thesis proposes that a significant actor in their successful resistance and cultural survival is the regular, ritualized consumption of peyote that has provided the Wixáritari with psychological and social benefits. Specifically, recent research has shown that supported psychedelic use aids in novel problem solving and resilience to stress, increases feelings of connectedness, and stimulates noetic insight, and these benefits appear to support the Wixáritari's fight against a multinational corporation which has the support of the federal government.

The thesis then broadens its scope to explain the relevance of the Wixáritari case for social theory more generally. I describe how the recent neuroscientific paradigms which are resulting from this research such as that of the "entropic brain" cohere well with anthropologist Victor Turner's conception of structure and anti-structure. The thesis then goes one step further to suggest that all societies once had methods of inducing this type of anti-structural/entropic experience as a means of ensuring psychological and social health, and that the Wixáritari are just one example of a culture which has

maintained these rituals into the present day. It then speculates that these ritualized uses of psychedelics may point to a biological and cultural basis for the foundation and persistence of religious and mystical experience in general, as a producer of social solidarity and inhibitor of mental illness, and a means for ensuring flexible and creative solutions are crafted against whatever existential or environmental threats may arise in human experience.

## Dedication

I dedicate this work to the memory of Margarito Díaz González, a Wixárika leader who helped lead the fight for the preservation of Wirikuta, along with a multitude of other incursions into tribal territory, and who was killed in his home in 2018 by unknown assailants. I likewise dedicate it to all indigenous activists who have worked to save their ancestral territories along with the wisdom that suffuses their land.

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## Chapter I.

### Introduction

In the Sierra Madre Occidental mountain range of Northern Mexico reside the Huichol, or *Wixárika* (pl. *Wixáritari*)<sup>1</sup>, as they refer to themselves (Schaefer 1); an indigenous group sometimes referred to as the North American culture least changed from its pre-conquest roots (Liffman 1). Hundreds of miles away, on the slopes below a semi-abandoned silver mining town in the Southern reaches of the Chihuahuan desert, is the *Wixárika* ceremonial homeland, known and revered since pre-colonial times as *Wirikuta*. The *Wixárika* are currently engaged in a struggle: a political, environmental, spiritual, and, to them, existential struggle. *Wixárika* shamans, or *mara'akate* (sing. *mara'akame*), declare that they are fighting for the soul of humanity (*Last Peyote Guardians*), and against all odds, they are holding their ground.

How is it that a small indigenous group has successfully resisted the advances of an international mining corporation, who, in concert with an apparently corrupt government, is trying to extract profit by opening a series of silver mines in and around the center of the world for the *Wixárika*--- their axis mundi? This thesis relies on a combination of ethnography, ritual theory, recent neuroscientific evidence, and current reportage to propose an answer. While it might be tempting for an outsider living in a desacralized world to scoff at the *Wixárika* insistence that their continued access to *Wirikuta* and the peyote that grows there is necessary “to maintain the universe” (*Last*

*Peyote Guardians*), a careful study of how their centuries-old traditions inspire their activism informs us about the nature of faith, spiritual experience, and psychological well-being in the modern world--- and indeed, even cultural and ecological survival.

The Wixárika's primary territory lies in the Mexican states of Nayarit, Jalisco, Zacatecas, and Durango. They are generally known among outsiders for either their dubious "man-out-of-time" ethnographic reputation, for their vibrant yarn and bead art, or for their sacramental peyote consumption (Berrin 11-14). What's lesser known, though, is that the Wixárika, just as they have for hundreds of years, continue to engage substantially with outside cultures in religious, economic, and political arenas, using the ongoing process of syncretization to strengthen, rather than weaken, their society, and largely maintain tribal sovereignty (Liffman 9, 42). This is lately being put to the test, however; while they have battled forces as varied as warfare, disease, slavery, missionaries, and cultural genocide for centuries, the current challenge the Wixárika are currently facing is spiritually existential. Every year, small groups of Wixárika go on pilgrimages several hundred miles to the extraordinarily holy ground of Wirikuta. Oral tradition dictates that this is the historical Wixárika homeland, and ethnohistorical data seems to concur (Myerhoff 55); even on a straightforward level, the fact that a sacrament as intrinsic to their mountain-dwelling culture as peyote only can only be found in the desert strongly suggests that a desert-dwelling past occurred within cultural memory.

In any case, this is part of what makes the current situation so complicated, as well as so fascinating: what rights does an ethnic group have to a land that they live hundreds of miles away from? Does the fact that Wirikuta is the center of the Wixárika

cosmic universe mean that they ought to be guaranteed access, including to its natural resources? What if their spiritual interests are (at least ostensibly) at loggerheads with the material interests of those who actually *do* live in the area? The Wixárika have responded to these thorny questions with novel solutions, which I will delve into in some detail in Chapter II. The basic facts are such, though: In 2009, the Mexican federal government granted mining rights to a Canadian company, First Majestic Silver, for over half of the territory of Wirikuta, which lies outside the colonial silver mining town of Real de Catorce (Liffman 8). The town had been a colonial hotbed of silver production, but was largely abandoned when the price of silver dropped precipitously in the first years of the twentieth century. New industrial mining techniques in combination with rising silver prices have rendered metal from the sacred mountain potentially profitable again, though, with the use of a tremendous amount of ancient groundwater and toxic arsenic foam to sort the silver from the detritus (*Last Peyote Guardians*).

True to their resilient history, the Wixárika have waged a decade-long, multi-front resistance campaign against the project (*Last Peyote Guardians*), mixing the traditional seamlessly with the contemporary. Areas of resistance include the spiritual (myriad communities gathering for prayer), the political (filing lawsuits, appearing before the Mexican National Assembly and the United Nations), and the public (staging protests in the lobby of First Majestic Silver Corp, helping to organize a huge benefit concert, ‘Wirikuta Fest’). Organizations such as the *Consejo Regional Wixárika en Defensa de Wirikuta* (Wixárika Regional Council for the Defense of Wirikuta), were formed, bringing together traditional models of community leadership with regional and national

non-profits as well as political, cultural, and scientific advisors, all with Wixárika leaders at the helm. While the final outcome is still uncertain, no new mines have yet been dug, a remarkable achievement in itself considering the many uphill battles indigenous populations across Mexico face while advocating for their territorial rights.

The landscape of indigenous resistance to extractivism is extremely varied, not just in Mexico, but in Latin America (and indeed, the world) as a whole. Techniques, as well as levels of success, are as multifaceted as the cultures themselves. The last several decades have seen a florescence of indigenous pride in much of the Mesoamerican world (Warren and Jackson 13), with moderate reversals in both popular cultural opinion and legal rights beginning to undo the damage of centuries of repression. The Wixárika have been particularly successful, however, in their multifaceted approach by seamlessly blending modern resistance techniques with their traditional culture, and in the process garnering tremendous outside support and recognition while largely maintaining tribal character and sovereignty. This matches the deft adaptations in other areas of Huichol culture: for example, traditional votive offerings evolved into the now world-renowned yarn and bead paintings in the mid 20th century as a new, hybrid form of religious/commercial fine art (Furst 30). Indeed, rather than compromising their own cultural values for the sake of wider integration with the outside world, the Wixárika emphasis on maintenance of cultural traditions and self-sufficiency means that there are autonomous decisions constantly being made concerning how to engage with the outside world (Liffman 152).

## The Power of Peyote

So, the question arises--- what is it that lends this group of roughly 45,000 indigenous peoples their extraordinary staying power? How have they been able to hold a large, multinational corporation at bay--- in order to protect what, to an unaware, capitalism-minded outsider, would look like a supply of scrubby cacti growing in a patch of unremarkable desert? An easy (albeit incomplete) answer to the first questions could be the remote location of their domestic territory; the Wixárika traditionally dwell in inaccessibly steep mountain canyons far from any urban area (Liffman 42). That doesn't address the latter, though; the Wixárika are choosing to grapple with the outside world in order to save the territory that they believe is central to their existence, and which produces the sacrament that is fundamental to their world view and continued contact with the divine.

This thesis hypothesizes that it is exactly this primary religious experience that is a substantial underlying factor of successful Wixárika cultural continuity, as well as of their ongoing struggle against silver mining in Wirikuta. The Wixárika themselves credit information gleaned from regular, ritualistic peyote use as being intrinsic to all aspects of life (*Last Peyote Guardians*). This in itself merits close consideration, but as scholars in 2020, we find ourselves in a fortunate position; cutting edge neuroscientific research is being done into the effects that psychoactive substances such as peyote have on the mind (Belouin and Henningfield). We therefore are able to--- not *prove* or *disprove* the contact that the Wixárika are having; that is not our place, even if it were possible--- but identify

the biological mechanisms through which the Wixárika are preparing themselves for this contact with the divine, and recognize the psychological and social benefits that seem to result from this contact.

Indeed, there is currently a renaissance of research into these substances, collectively known as psychedelics<sup>2</sup>, underway, powered by a confluence of new neuroimaging technology, a relaxation of FDA restrictions regarding the study of this type of drug, and a concomitant loosening of the general cultural anxiety surrounding their use. It bears mentioning that the bulk of the new wave of research is being done not with peyote or its primary active chemical mescaline, but with psilocybin; however, the “classic psychedelics” (which also include LSD and DMT) all affect the brain in broadly similar ways, and have been shown to have similar post-experience beneficial effects (Vollenweider). It is these effects which are so interesting, in terms of this thesis; they include increased feelings of social and environmental connectedness, increased resistance to stress, and a heightened ability to problem-solve in novel ways (Forstmann and Sagioglou, Ross, Sweat); all attributes which could certainly be benefitting the contemporary Wixárika both in their fight to save Wirikuta and in their continuing cultural strength in general. Chapter III lays out the real world implications of these psychosocial benefits in some detail. The thesis interrogates the evidence to show that indeed, the Wixárika seem to be reaping the benefits of a large-scale societal psychopharmacological intervention by way of a fundamental religious rite.

If we accept this premise, a host of issues arise, some of which will be addressed in later chapters. For one, does the fact that the Wixárika are benefitting from culturally

entrenched peyote use mean that any psychedelic experience is inherently and universally beneficial? I argue against this idea; the Wixárika have a centuries-old ritual system that undergirds most aspects of life, including peyote consumption, which contextualizes the potentially disorienting or frightening visions and other changes in cognition that reliably occur, and allows for a smoother integration of the experience (Myerhoff 73, 189, 221). As a tool for understanding the importance of the ritual and cosmological framework for Wixárika peyote experiences, anthropologist and ritual scholar Victor Turner's conception of "structure and anti-structure" are useful. I will more fully demonstrate the facility of this paradigm in Chapter IV, but briefly, Turner theorizes that solid doses of these two poles of orderliness are necessary to maintain a vibrant culture. He shows that without one or the other, societies tend to lapse into stagnation or irrelevance (*Ritual Process* 146). Turner goes on to write that one benefit the presence of anti-structure confers is the instigation of *communitas*, a boundary-dissolving feeling of community and oneness that seemed to occur during many of the rituals Turner observed in the field (*Ritual Process* 96-97). The experience brought on by peyote use, in all its boundary-dissolving importance, can surely be said to precipitate anti-structure, and instigate *communitas*. The larger cultural "religious" framework is what provides the necessary structural balance, and what sets a Wixárika peyote experience apart from a more typical "recreational" psychedelic experience. (I am not arguing that psychedelic experiences outside of a ritual setting *can't* be beneficial, but that there is a higher likelihood of lasting positive influence if there is a countervailing anchor to the entropic tendencies of these substances' effects on the brain.) I argue that these



spirituo-psychological benefits of the peyote experience, mediated by the extremely sophisticated deer-maize-peyote complex it is a part of, not only contribute to successful resistance against the First Majestic mines, but are a primary reason that the Wixárika have remained as independent and culturally cohesive as they have. This section, by neatly fitting what Liffman calls “the *necessary* Huichol contradiction between order and profligacy” (151) into Turner’s theory, also serves to shore up Turner’s theory of structure and anti-structure by both providing one more real-world example of its truth and speculating on a neurochemical basis for its existence.

### Broad Implications

By examining the ethnographic data, the ritual theory, and the contemporary reporting, and combining it with the aforementioned (as well as additional) neuropsychiatric evidence in an interdisciplinary way, we can take this idea one step further. Once I solidly ground this particular example of Wixárika resistance in the context of their specific history, cosmovision, and sacramental drug use, I will project the concept outward, which I believe gives this thesis potentially profound implications beyond the field of Mesoamerican ethnography. It gestures towards larger questions about the importance of direct religious experience in society, including in regards to mental health, political activity, ecological awareness, and social cohesion. Indeed, perhaps each of these, inspired by contact with “the divine,” contributes to the presence of the others. If viewed with an open mind, this work even seems to provide a window into the origins, and possible treatment, of the modern mental health epidemic.

It has been noted since the beginning of the modern era's awareness of psychedelics that these substances can instigate profound spiritual thoughts, even in a clinical laboratory setting; in an interview late in his life, Albert Hoffman, the discoverer of LSD, reported that his "first experiences with LSD were very reminiscent of these early mystical encounters [he] had had as a child in nature" (Grob). It has only recently been shown, however, that these mystical experiences are both experientially *and* neurologically extremely similar to "spontaneously occurring" ones, such as those precipitated by deep meditation, to the extent that there can't be said to be any meaningful difference between the two (Griffiths et al; Yaden et al.). Yet another robust body of recent research shows that clinically-administered psychedelic compounds can aid in the treatment of otherwise intractable psychiatric issues, such as treatment-resistant depression, end-of-life anxiety, alcoholism, and PTSD (Belouin and Henningfield). I will speculate that given the above, the psychological benefits of psychedelic-induced mystical experiences aren't dependant on their source; that if indeed they are neurochemically and experientially identical to mystical experiences brought on by meditation, fasting, breathing exercises, etc, then these techniques should be just as medically sound as psychedelic treatment. They are, however, substantially more difficult to study in a laboratory setting; it may take years to master such techniques, compared to the instantaneous and replicable experience brought on by, say, a psilocybin pill.

Throughout, I attempt to draw all of this data together to speculate that there may be a link between the social, the spiritual, and the psychological, in a direct and measurable way. Could it be that Turner's ideas about the necessity of anti-structure

holds true not just on the societal scale, but on the neurobiological as well? After all, the aforementioned diseases can all roughly be described as related to excesses of structure of some kind, the inability to shake oneself out of a set pattern of brain network activity. Recent research shows that psychedelic treatments are able to rewire the brain in these circumstances, increasing neural connectedness between disparate parts of the brain, and encouraging neurogenesis (Carhart-Harris, “Psychedelics and Connectedness”). Perhaps it’s not a coincidence that many of these mental illnesses that preliminary research shows are effectively treated by psychedelic therapy are currently reaching epidemic proportions in the United States (Belouin and Henningfield). Could it be that these are “illnesses of the modern condition” in more than a metaphorical sense? If there is indeed a neuropsychiatric benefit to the psychological states associated with the precipitation of *communitas*, then perhaps as the world became increasingly modernized and this experience became ever rarer, a host of afflictions related to the inability to escape from a set routine of one kind or another set in. Dr. Robin Carhart-Harris, head of the Centre for Psychedelic Research at Imperial College London, has in fact referred to these diseases as potentially stemming from an excess of order, with a psychedelic providing a dose of much-needed entropy (*The Entropic Brain*). These treatments seem to be replacing the ritual inductions of anti-structure that evolved in societies all over the world in order to maintain social and psychological health, and which globalization and modernity have been chipping away at for decades, if not centuries. It seems to be some mechanism of breaking down barriers (both psychological and neurobiological) and creating new connections that allows these cutting-edge, yet age-old treatments to have such

substantial effects (Pollan, “The Trip Treatment”). I will speculatively show a connection between the modern era’s retreat of “primary religious experience” (along with feelings of *communitas*, or anti-structure, in general) and the onset of mass modern mental illness; this thesis attempts to marshal the assorted evidence relating to the Wixárika and beyond to show that there may in fact be a demonstrable link.

## Chapter II.

### Historical and Social Context

The remarkable Wixárika resistance campaign has not sprung from a vacuum; they have been beating the odds to maintain strong cultural cohesion for centuries. This chapter will lay out a small part of that historical and social context. It will also, however, show that the Wixárika's multifaceted strategy is so effective that there may be other forces at play beyond the strictly cultural. The chapter touches on the various strains of resistance, followed by a few words on the situations of other Latin American resistance campaigns to highlight the Wixárika's relative success. A close examination of the various factors coming together in the Wixárika resistance is worth investigating as it not only helps to explain one fairly small population's cultural resilience, but point the way towards a greater understanding of how continuing unbroken ritual practices can have direct impacts on a society's livelihood.

Before I dive into the body of the work, let me explain what this thesis is *not*. It is not a systematic study of political and economic resistance in Latin America. While I make a supposition based on the information available to me, it would be extremely worthwhile to more fully examine recent episodes across the region to see whether indigenous societies, especially those that maintain their traditional ritual practices, are in fact definitively more successful in political and economic resistance activities. It is also not a work of ethnography; there are many fine studies of Wixárika culture, religion, art,

and more, going back over a century. From Norwegian explorer Carl Lumholtz's 1900 *Symbolism of the Huichol Indians* to Barbara G. Myerhoff's 1976 classic of the genre, *Peyote Hunt: The Sacred Journey of the Huichol Indians*, there is a wealth of literature that show what could be called the "classic" characteristics of Huichol society. More recently, Paul M. Liffman's *Huichol Territory and the Mexican Nation: Indigenous Ritual, Land Conflict, and Sovereignty Claims* delves into many aspects of Wixárika territoriality, including the early stages of the fight to save Wirikuta, and Stacy B. Schaefer's *To Think With a Good Heart: Wixárika Women, Weavers, and Shamans* examines the typically overlooked role that women play in Wixárika society.

While recognizing that the concept of the Wixárika being "out of time" isn't accurate, one of the reasons they have been the subject of such anthropological scrutiny is the idea that they are, in some ways, a window into pre-contact Mesoamerican life. As a people, they have consistently done an effective job of holding onto an ancient cosmovision and important cultural touchstones while remaining a dynamic living culture; they had been exposed to (and evolved with) the "outside world" for centuries before these ethnographies were written, and have continued to do so since. Recognizing that my understanding of this rich culture will be limited by the fact that I haven't performed any field work of my own, I will attempt to augment my knowledge with less formal sources, such as recent reportage and documentary film as well as the digital footprint of the Wixárika themselves. Additionally, my hope is that my lack of direct observation will be made up for by a wide breadth of approaches, combining the existing

ethnographic data with information gleaned from other disciplines in a heretofore unexplored way.

### Ethnohistorical Background

The deep connection that the Wixárika feel to Wirikuta, along with the rather unique fact that their *axis mundi* is well outside of their day-to-day territory, is integral to this thesis. Some background information is necessary, then, which will help to elucidate the importance of this sense of place, as well as how it fits into the wider cultural, political, and economic struggles that the Wixárika are engaged in. There is much yet unknown about the specifics of from where, and when, the Wixárika (or their cultural precursors) arrived in their current home. It's likely, however, that there is a high degree of historical accuracy to Wixárika origin stories and their accompanying migration narratives that point toward the east (or northeast). Peter T. Furst convincingly presents the possibility that these narratives can be placed historically as a response to Spanish colonization, and that the Wixárika previously were a part of a huge cultural tapestry ("Myth as History" 45), of which they have been the most successful at continuing the religio-cultural traditions. (It was "the First Mar'akame, following the original path of their ancestors," who initially led the Wixárika back to Wirikuta (Myerhoff 56). The fact that there is easy, ongoing commingling of myth and "reality" shows that Wixáritari practice a living, adaptive religion, which I propose contributes to their cultural survival.) Speakers of the Wixárika language group, Uto-Aztecan, once stretched "as far west as California and the Great Basin, as far north as southwestern Wyoming, and as far south

as Nicaragua and El Salvador, not to mention large areas of Mexico” (“Myth as History 47”). Likewise, recent work by Carolyn E. Boyd connects contemporary Wixárika imagery and mythology with the Pecos River cultures centered five hundred miles north of Wirikuta, of whom little is known, but for whom peyote seems to have played a central role in ceremonial life going back at least five thousand years (8-9).

The most obvious evidence that Wixárika (or proto-Wixárika) territory once stretched beyond the Sierra Madre Occidental is the intense weight that peyote, a plant that only grows in the desert, holds in countless facets of their mountain-dwelling culture. Peyote, or *hikuri*, as the Wixárika refer to it, is a critical part of agricultural, curative, and visionary rites; it also, in general, “engenders a living complex of myth and symbol and ritual behavior that they consider vital to their existence and survival as a distinct people...” (Schaefer and Furst 23-24).

In aesthetics, mythology, oral tradition, symbolism, and cosmology Huichol culture is highly developed, rich, and especially beautiful... Religion, here especially, cannot be severed from other aspects of Huichol life. There is no distinction between sacred and profane, nor is there even a reliable separation between secular and sacred (Myerhoff 73-74).

Peyote is central to this worldview. All Wixárika ceremonial events throughout the year require peyote consumption (Myerhoff 76), and “the most intense sacred experience they know” (Myerhoff 74) is the peyote hunt that the annual pilgrimage culminates in. The pilgrimage itself is a highly ritualized combination of walking and riding buses, trains, or, in Myerhoff’s case, a camper with deer antlers affixed to the front, with countless stops to honor holy sites along the way (122). (Myerhoff’s account features many fascinating details of how the *mara’akame* who led the pilgrimage that she participated in, Ramón



Medina Silva, incorporated “innovations and special preparations” that allowed him to maintain the vital characteristics of the trip while including new elements of the modern world (e.g. 124-5.) It is a hunt in a literal sense; after the pilgrims get to Wirikuta the cactus, which initially sprang up in the tracks of a deer, becomes a deer itself. The first specimen spotted has to be stalked, impaled with arrows, and its rainbow lifeblood, *kupuri*, which had spurted out, coaxed back inside it. (Myerhoff 150, 153-4).

More intricate rituals occur; the pilgrims retreat outside the holiest ground for the evening, and return the following day to pick large quantities of peyote “for the subsequent dry-season ceremonies, the success of which depends on the return of *hikuritámete* [peyote companions] with sufficient peyote” (Myerhoff 161). Small amounts are ritualistically eaten as the pilgrims gather, sort, clean and pack the peyote “as a means of achieving communion rather than for inducing visions” (Myerhoff 164). That night, the pilgrims consume large amounts of peyote around a fire. While for untrained attendees the visions that commence do not necessarily carry divine import, the *mara’akame* (who is also often a political leader of the community) “receives his messages from the gods when he has eaten peyote. Then he sees and speaks with *Tatewarí* [Our Grandfather Fire], *Tayaupá* [Our Father Sun], learns the names of things, the meanings of things, receives important messages, warnings and so forth” (Myerhoff 165-6). (It bears mentioning that Myerhoff goes on to note that “...it is not only with the aid of peyote that the *mara’akame* can call on the deities. He is able to do so without it, as when he drums, chants, and sings” (166). I will return to this point in later chapters.) The pilgrims, having successfully completed their mission, return to the Sierra. Several weeks

after returning home, in the first post-pilgrimage ritual, “The Cleansing of the Spines”, the mara’akame asks the Ancient Ones if they are pleased with the success of the trek, and is told to return the following year, “...and the year after that, because we will give you more life, so that you will be able to live stronger this whole year and return to us at the end of that year” (Myerhoff 173).

I have only, in the broadest strokes, mentioned a tiny portion of the rituals involved in what Myerhoff refers to as the “deer-maize-peyote complex”. The pilgrimage itself, for instance, involves rigid strictures concerning “washing, sexual relations, full meals, drinking, defecation, urination, and sleeping...” (Myerhoff 172). By shedding all earthly characteristics, the pilgrims become gods themselves, returning to the Wixárika sacred homeland. Myerhoff speculates that this is both a spiritual and a historical return (243). Knowing the importance of peyote in Wixárika society, it’s not difficult to imagine that when the Spanish colonial government banned the use of peyote in 1620 on account of its alleged Satanic associations (Leonard 324-325), the Wixárika would be inclined to retreat to a remote area where they could practice their peyote rites away from the eye of the Inquisition. Use of the sacrament also survived prolonged Franciscan conversion attempts (Myerhoff 53), with the result being the remarkably sophisticated peyote worship complex that continues to this day, as well as a group of people well-accustomed to doing what is necessary to preserve it.

## A Common Struggle

Sadly, the fight to protect indigenous land rights is a common (and necessary) one in a world shaped by neoliberal political and economic forces. There are certainly examples other than the Wixárika of innovative, sustained indigenous political resistance elsewhere in Latin America. To cite just one example, in the wake of the FARC peace agreement passed in 2016, a collective of twenty indigenous groups in the Cauca Valley of Colombia have been systematically clearing monocultural crops and replacing them with traditional ones like maize and cassava, as well as forming a “*guarda indígena*” which “has already closed down several mines despite threats from militias who are alleged to be in the employ of the owners. The volunteer force, dressed in green-and-red uniforms, is armed only with wooden staffs decorated with coloured tassels” (Watts). Conflicts between local officials and the indigenous groups such as the Kokonuko and Nasa have escalated, however, to the point where homemade petrol bombs are being made to hurl at the riot police, who are using tear gas and live ammunition. As of March 2019, dozens of local leaders had been killed, including by the Colombian army. Regular collective actions, called “mingas,” have been ongoing, but as of yet demands for increased land rights have been ignored, and violent confrontations seem to be increasing (“Protesting in Cauca”).

Extrajudicial killings of indigenous resistance leaders are not uncommon across Latin America, including both in the Cauca Valley and among the Wixárika; in September, 2018, Wixárika political and spiritual leader Margarito Díaz González, who was active in the fight against First Majestic, as well as other legal struggles, was

assassinated in his home (“Indigenous Huichol Leader”; Watts). How, then, have the Wixárika been able to persevere in the face of both cultural and physical violence to bring together such a vibrant coalition of techniques and outside partners to perform an extremely varied slate of resistance activities--- all without resorting to violence themselves? Let us examine the broad strokes of the ways that this fairly small group of people, who live in a remote part of a notoriously corrupt country (“Corruption Perceptions Index”) has marshalled such a robust and effective defense of their beloved territory.

### A Silver Town Divided

Though from a Wixárika perspective the fight for Wirikuta is a microcosm for the very survival of the universe, the economic and political details are more nuanced than that of “good vs evil”. The holy ground of Wirikuta sits just outside the economically struggling mestizo town of Real de Catorce. It was founded, and prospered, with the aid of robust silver mines; while there is slowly growing tourist interest, the financial situation of the local population is a shadow of its former self. It’s easy to see, then, how the 2009 proposal from First Majestic Silver Corporation to begin operations on a 15,000-acre silver mining concession would be tempting (Liffman 8): the possibility of precious metal again flowing from the ground, providing countless jobs, and returning the town to its former glory. Why would the predominantly Catholic Mestizo population of Real de Catorce be swayed by the protestations of an indigenous population who lives in

an altogether different region of the country, and shows up in small pilgrimage groups only once a year, for just long enough to harvest their community's supply of peyote?

There are certainly arguments that can be made beyond the spiritual against the establishment of the silver mines. The bulk of the capital extracted by the local workers will flow north, to the shareholders of the Canadian company; while townspeople would get employment as miners, only a miniscule percentage of the wealth produced by this silver will stay in Mexico, continuing a pattern established in the colonial era. Beyond this, groundwater which has existed in aquifers underneath the desert for thousands of years will be used for processing the precious metal, making agricultural water use substantially more difficult (Last Peyote Guardians). Lastly, the modern, more efficient mining techniques which makes this concession economically feasible uses toxic chemicals such as arsenic foam to sort the silver from the detritus; an operation which First Majestic insists is environmentally safe, but has leached into the earth elsewhere in Mexico, being detectable in the urine of children living near mining areas (Moreno).

The entire situation is one that emerged after a prior victory; in June 2001, eight years before the First Majestic mining concession was approved,

Wirikuta was decreed (along with two other [sacred sites]) by the state government of San Luis Potosi as the first designated sacred natural site in Mexico. In this groundbreaking legal precedent, Wirikuta became the first protected area in Mexico explicitly designed to protect both spiritual and cultural values and biodiversity. In addition, over 135 kilometers of the traditional pilgrimage route the Huichols use to reach Wirikuta have now been protected by San Luis Potosi. (Otegui Acha 296)

Even before the imminent threat of the new silver mining operation existed, the Wixárika worked with conservationists and state legislators to enact this decree, largely to prevent

construction of a road that would have bisected Wirikuta. It's fortunate that the site lies in San Luis Potosi, for its "environmental law is one of the most advanced and sophisticated in Mexico... [it] has the distinction of taking into account the protection of natural sites sacred to indigenous peoples who, like the Huichols, traverse or inhabit the state" (Otegui Acha 302-303). Less fortunate for the Wixárika, however, the national government does not share San Luis Potosi's progressive views on indigenous land rights, and disregarded the state decree to allow First Majestic to establish their mining concession in this conservation area (which beyond its cultural import, is actually an incredibly diverse ecosystem, with a considerable amount of endemic flora (Otegui Acha 303)). This was part of the "neoliberal regression... toward giving private and foreign capital greater access to the country's subterranean resources under favorable terms, including flexible labor contracts, low taxes and no royalties in the mining sector..." that began after the debt crisis of the 1980's (Tetreault, *New Extractivism*).

With a dearth of local economic opportunity, one cannot blame the portion of Real de Catorce's mestizo community who would welcome the opening of a silver mine and choose to believe the slick businessmen and government officials who make assurances about its safety and profitability. The Wixárika, however, have been hearing assurances and decrees from outside authorities about what will benefit them for centuries, and it is a seeming skepticism to them that has contributed to their survival thus far. Recent territorial incursions are only the most recent threats to Wixárika hegemony; they have adopted modern resistance techniques because that is what is necessary to

resist modern threats in a modern world. Let us examine some of these techniques before we speculate on what may be contributing to the Wixárika's stubborn adaptability.

### Multi-Pronged Resistance

A full accounting of the Wixárika's varied efforts of the last decade to prevent the Real de Catorce mine from being dug could fill (and would merit) a much longer volume; I will sketch out some notable elements. First, and perhaps undergirding all other techniques, is spiritual resistance. The 2015 documentary film *Huicholes: The Last Peyote Guardians* shows a mountaintop prayer summit that brings together spiritual leaders from myriad Wixárika communities, which ordinarily maintain high degrees of autonomy. Until the recent existential threats necessitated large-scale cooperation, the five principal Wixárika communities resembled "a cluster of bands more than a true tribal organization" (Myerhoff 63). When it came to saving their holiest site, though, that changed: "Communities that have disputes with each other--- land problems... serious problems. Due to Wirikuta they could overcome them. All of them arrived together... All! They sang together, they made a pact in the center of the ritual. All of them." (*Last Peyote Guardians*)

This gathering points towards other canny resistance tactics; the first is that beyond joining together with other Wixárika groups, the population as a whole, normally extremely hesitant to let outsiders gain access, has actively pursued a large scale public relations campaign to gain national and global support and resources. As one mara'akame in the film explains to the audience: "This message is for the whole world to know. So we

can all work together for the wellbeing of our planet. I ask all the country, and people from other countries too, for your participation to lend us a hand to find solutions to save this sacred mountain.” This is a remarkable sentiment to come from a population whose very survival over the centuries since European contact has depended on retreat from non-Wixáritari (Otegui Acha 297). The fact that this film exists at all is reflective of this newfound openness; as one tribal ally says about the prayer summit, “[t]hey agreed to document everything. They agreed that to the top of the Cerro del Quemado [*Burned Hill*, the central ceremonial peak of Wirikuta] could come, photographers, filmmakers, journalists. Something they never allow, because they consider that this struggle is a very big struggle. Even traditional elders who never accepted this, they agreed.” As if to put an exclamation mark on the sentiment, the ritual culminated in a thunderstorm (in a region that had been undergoing a decades-long drought).

The apex of this branch of the struggle came with tremendous Western-style benefit concert, Wirikuta Fest, which included such Mexican superstars as Café Tacvba and Calle 13, drawing attention to and raising funds for the ongoing fight. When a Wixárika delegation went onstage, a “massive screen flashed images of traditional Wixarika beadwork behind them as 60,000 fans chanted, in unison, “*Wirikuta no se vende! Wirikuta se defende!*” (Wirikuta is not for sale! Wirikuta will be defended!)” (Barnett). To emphasize the scale of this event, let me point out that this was substantially more people in one stadium celebrating their support for the Wixárika than there are Wixáritari in the world. The funds from this endeavor, beyond directly supporting the Wixárika legal team, went to support a host of activities meant to increase healthy



ecological and economic alternatives to the silver mine in Real de Catorce, including setting up permaculture-style agricultural projects for the mestizo population and a women's cooperative to create and market herbal salves from local flora (Barnett, *Last Peyote Guardians*). The bulk of these projects were initiated by a coalition of Wixárika leaders and non-tribal allies known as the *Frenta en Defensa de Wirikuta* (Wirikuta Defense Front), which emerged out of the Wixárika-only *Consejo Regional Wixárika por la Defensa de Wirikuta* (Wixárika Regional Council for the Defense of Wirikuta), which itself came together shortly after the Wirikuta mining concessions were announced. Lest a skeptic suspect that the struggle for Wirikuta is being led predominantly by outside actors, though, we can see that while the *Frenta en Defensa de Wirikuta* was a novel and, for a short time, effective organization, the *Consejo Regional Wixárika* ultimately severed ties with them for a lack of financial transparency. Wixárika leaders chose to reassert their agency in the fight for their sacred ground ("Historia").

Another public act of defiance (which neatly segues into the final tactic I'll discuss) is equally surprising for a group accustomed to non-confrontation; a 2010 public march in front of the First Majestic Silver's Vancouver headquarters, followed by attempted entry into the shareholder's meeting. As the young Wixárika attorney and tribal leader Santos de la Cruz explained, "The visit to the shareholders' meeting in Vancouver was to make the investors and shareholders realize what is being done with their investments, where they go. "Your stock is causing this. It's deteriorating, exterminating a culture!" We hope that our message touches their hearts." (*Last Peyote Guardians*) Whether or not the sight of traditionally dressed Wixáritari holding up

posters bearing vibrant renderings of Wirikuta while security guards refused access affected any corporate consciences is unknown; its camera-ready nature certainly played well on film, however, helping to endear a worldwide audience to their cause.

This media-savvy resistance public resistance technique is rounded out by perhaps the most cut-and-dry facet of the campaign; direct legal action. Beyond the aforementioned suit, earlier Wixárika activism has resulted in UNESCO recognizing Wirikuta's significance as a Sacred Natural Site, and former president Felipe Calderón signed the Hauxa Manaka Pact, which guaranteed Wixárika territorial rights (Tetreault). The timeline is somewhat confusing at this point, because just as in any nation where money carries heavy political weight, there was a series of victories and setbacks in quick succession. Due to Wixárika pressure, including appearances at the Mexican Congress of the Union and the United Nations, Calderon in 2011 affirmed his prior agreement to honor sacred Wixárika Sites, and in 2013, "Mexico's federal courts blocked all mining in a 140,000 hectare area of Wirikuta, a major victory for environmental and indigenous rights. But in Mexico, time tends to wear down political opposition and global money tends to prevail over community activism" (Hollander). The fear is that both the government and First Majestic are only biding their time, hoping that as widespread attention fades, mining activity will be able to begin again. Indeed, the Mexican government has never officially canceled the mining concessions, and it is still listed as an active project on the First Majestic website, which makes no mention of legal challenges, only the high potential for profit ("La Luz Silver Project"). Recognizing this, the Consejo Regional has stayed together, organizing to oppose additional threats to

Wixárika territorial sovereignty such as wind turbines and mestizo cattle ranchers. They even recently published a declaration on their website expressing solidarity with “comrade Greta Thunberg”, the Swedish teenage climate activist, adopting her rallying cry of “How dare they!” to fit their own circumstances (“Let’s Defend the Planet”).

For the purposes of drawing an instructive (though anecdotal) comparison, let us briefly examine what a nearby, less successful resistance campaign looks like. (The following information, except where noted, is courtesy Garibay Orozco et al.’s detailed study.) The Peñasquito mine in Zacatecas, Mexico, though it extracts gold rather than silver, has many parallels to the prospective one in Wirikuta; it is owned by a Vancouver-based company, consumes vast amounts of groundwater and uses arsenic foam to operate. They were also a part of the same surge of foreign mining concession sales in the years around the turn of the century that all together total over thirty percent of the national territory, were largely done without consulting local populations, and were sold for a fraction of their value. (Tetreault, *New Extractivism*). The local population, largely made up of *mestizo* peasants, was initially optimistic about the mine’s promise for their community’s future; a federal agricultural inspector assuaged their fears, they were paid a one-time land usage fee, and the mining company, Goldcorp, brought

...sewing machines for the women, walking aids for the elderly, soccer uniforms for the youths, toys for the children, and food packages for families. They remodeled some chapels and schools. They also had ejidatarios [members of *ejidos*, communal land use agreements] sign up for training courses with the promise of giving them jobs. Others were hired as workers in the company's plant nursery to "help protect the environment".

President Calderón appeared at the mine's opening, thanking the Canadian ambassador "for creating the jobs we Mexicans are so in need of". It didn't take long, however, for the local community to have second thoughts, once their hand-dug wells which had reached groundwater for centuries began to dry up, and they realized that it was to be an open pit mine, not a shaft mine, as they had been led to believe. They staged a blockade of the mine, seeking assistance from a local leftist organization, and demanded higher annual payouts, citing a host of contractual infractions. With the assistance of largely apathetic congressman and other government actors, the several afflicted communities succeeded in increasing their share from two to fifteen cents per one hundred dollars of gold extracted from the mine. This, for a project whose environmental impact is so severe, it "signifies the end of the peasant economy and the expulsion of the population."

#### Reasons for Success

So, with the understanding that the Wixárika are currently engaged in an uneasy stalemate in the fight to save Wirikuta, it's easy to admire the deep and varied resistance techniques that they have brought to bear over the last decade plus. It's a more difficult, as well as sensitive task, however, to try and get to the bottom of what has allowed this relatively small group of people not only to so tenaciously, creatively, and effectively resist foreign extractivism on their ceremonial homeland, but to engage with the modern world so successfully in general, on their own terms, while maintaining the heart of their cultural practices. One possibility is that Wixárika society hasn't been as ravaged by

alcoholism as many indigenous populations across the New World. Across pre-contact Mesoamerica, alcohol use had been kept in check by a complex system of ritual and taboo, but “[i]mmediately after the conquest, when the native boundary lines had been broken and traditional restraints were no longer operative, inebriety increased to an alarming extent...” (Bruman 72). This, in concert with direct and intentional ethnic cleansing campaigns on the part of the Spanish crown, created a sort of downward spiral in many native societies, with cultural cohesion decreasing concomitantly. This was especially true as the bulk of the population became *mestizo*, with an increasingly tenuous link to indigenous drinking traditions, and continues to be so today; “[a]lcohol abuse occupies first place among risk factors for premature death and days lost to disease” among the general Mexican population (Medina-Mora 1041). More research is needed into precisely what contributed to these tendencies, as well as resistance to them. There are intriguing glimpses available, though; for instance, among contemporary Maya peoples, “[a]bility to speak Maya appeared protective against at-risk drinking” (Zúñiga, et al. 335). In addition, remote communities of Guatemalan Maya where syncretic traditions of Catholicism that tolerated ritual drunkenness only recently receded have seen resultant increases in problematic alcoholism, alongside increased domestic abuse (Lewis 2, 7-8). Perhaps remnants of pre-contact taboos are more likely to remain extant among speakers of indigenous languages and practitioners of ancient rites; if so, this would certainly work to the Wixárika’s benefit.

Indeed, the Wixárika seem to have heretofore largely avoided the trap of devastating alcoholism; while use of commercial alcohol and its related issues is on the

rise since the increased ease of interregional travel in the 1970's, over-consumption of alcohol exists largely on the spectrum of ritual/profane activity, typically as a part of post-ritual revelry (Liffman 151). Henry Bruman, in his comprehensive study of Mexican fermentation practices, writes that peyote and alcohol were "supplementary and, to the extent that strong drink was ritualistic, partially interchangeable" (54). He explains the widespread use of peyote among certain indigenous groups as being a symptom of the relative unimportance of alcohol in their societies, essentially implying that it's more or less a stand in for an otherwise more popular inebriant. (In an endnote he describes the primary effects of peyote consumption as being "visual hallucinations, accompanied by nausea and various other physical and psychological derangements" (120)! This shows a truly uninformed spiritual and psychological awareness of the power of the cactus.) In a precursor to my larger argument, I posit that it is very likely that the opposite is true, and that widespread alcohol abuse is prevented by regular peyote usage--- not because it is one intoxicant in place of another, but because of the specific psychospiritual characteristics of the plant. These, as I will show, seem to help cure addiction, including alcoholism, under the right conditions; it seems possible that the Wixárika are essentially engaging in a society-wide psychopharmacological endeavor that contributes to their long-term social health. (I should note that genetic testing has actually indicated that the Wixárika are at least biologically at a much higher danger of alcoholism than virtually any other population in the world (Gordillo-Bastidas), so this feat is doubly impressive.) Support to this argument is provided by the fact that the most prominent non-Wixárika peyote users, members of the Native American Church, practice complete abstinence

from alcohol. In fact, one research psychologist familiar with the NAC wrote in 1971 that peyote “is a better antidote to alcohol than anything the missionaries, white man, the American Medical Association, and the public health services have come up with” (Anderson 113).

In this chapter, I laid out a small part of the Wixárika’s ethnohistorical background that is pertinent to the topic at hand, sketched out their resistance campaign to the First Majestic mine so far, and provided examples of other Latin American groups’ less successful struggles with extractivism. Lastly, I mentioned one possible factor in Wixárika cultural cohesion. There are clearly other factors at play in the Wixárika’s successful campaign beyond their relative resistance to alcohol abuse, however, such as novel problem-solving abilities and heightened feelings of connectedness with nature. I have suggested already that peyote assists with the former; in the next chapter, I will not only begin to delve into the latter two factors, but show the biological and psychological mechanisms by which peyote seems to be supporting all of them, as well as the ways that the Wixárika most effectively manage this sacramental/pharmacological intervention through ritual activity.

### Chapter III.

#### Peyote Ritual as Instigator of Neural (and Social) Entropy

In this chapter, I will delve into the central argument of the thesis: that among the Wixárika, ritually-mediated peyote use is a key factor in the struggle to preserve Wirikuta that has thus far been so successful against foreign extractivism. The Wixárika strategy is a remarkable blend of the modern and the archaic, the public and the political, the sacred and profane. The tenacity and effectiveness of this varied approach is so intriguing, it merits study not only for the specific strategies used, but for the overarching open-minded responsiveness of tactics as new challenges arise, as well as general tribal social cohesion. The Wixárika themselves claim that important knowledge is gleaned from peyote experiences, so the idea is not my own. The exciting aspect of this study is that we can look at peyote use from a modern scientific perspective, and try to understand how the neurochemical interactions that peyote induces, in concert with the ritual container of Wixárika religion, contribute to the continued success of the tribe's efforts.

Peter T. Furst wrote in 1972 that "...the symbolic religious complex that has the peyote quest as its sacred center appears to be the only survival on a major scale of a relatively pure Indian religion and ceremonial, without substantial admixture of Catholic elements, in Mexico today" (*Flesh of the Gods* 137). It is impossible to know how deeply peyote was enmeshed in other societies before the Conquest, as its widespread use was largely ended throughout the New World by the efforts of the Spanish Inquisition.



Carolyn E. Boyd makes the case that the rock art in the White Shaman Cave, at the northern tip of the Chihuahuan desert landscape that reaches south to Wirikuta, can be read as a pictorial text which illustrates both a peyote ceremony similar to the one the Wixárika still practice today and “...a visual creation narrative containing many of the elements fundamental to an Archaic religious system widely practiced throughout much of Mesoamerica and the American Southwest” (9-10). Though the cave was painted at least 1,500 years ago (26) and six hundred miles north of the shelter, Boyd was able to use contemporary Wixárika artwork and myth to inform her understanding, finding that much of the imagery and narrative remains unchanged (9-10). This would suggest that peyote was at one time an integral part of a wide-ranging cultural landscape, from which the Wixárika are the purest holdouts.

Today, neighboring tribes such as the Cora and the Tarahamara, who maintain a more limited peyote use without as sophisticated a ritual complex, view it with a combination of awe and fear, while the Wixárika view the cactus only with affection (Myerhoff 40). It seems, then, that maintaining as complex a ritual relationship to peyote as the Wixárika do is important to maintaining an unambiguously positive relationship to the sacrament; the Cora do not even harvest their own cacti, purchasing excess from Wixárika expeditions (Myerhoff 161). The differences between Cora peyote experiences and Wixárika ones requires further study, but my speculation is that less ritually-mediated peyote experiences still have the capacity to be psycho-socially beneficial. Without the sophisticated contextualizing religious complex, however, there is also the likelihood that the experience can be pleasantly neutral or “recreational”

without the weight of transmitted information, as it seems to be for untrained Wixáritari, or even that it be psychologically harmful, which would explain the fear the Cora and Tarahamura feel. In this chapter, I will begin to explore a possible neurochemical basis for the psycho-social benefits that seem to come from this ritually proscribed religious experience, as well as the negative experiences that can arise from an unmediated one. It is possible to discuss the benefits of peyote use in both neurochemical and anthropological terms; while this chapter does the former, the latter will come in the next chapter.

#### Recent Peeks Inside the Brain

Two scientific sea changes that are currently underway allow us to investigate the benefits of peyote use with a specificity that would not have been possible even a decade ago. First, the availability of functional brain imaging technology can give researchers detailed snapshots inside the brain as it engages in various states of mind. Second, there has been an abundance of recent research into the myriad psychological benefits of psychedelic medicine, as aided by the recent changing attitudes of the FDA towards the study of psychedelics.

The Wixárika are not being directly studied by neuroscientists, so a series of logical inferences encompassing both is necessary in order to project recent knowledge onto the matter at hand. First, it should be repeated that relatively little research has been done into the direct neurochemical effects of peyote itself. The bulk of the first wave of psychedelic research up through the late 1960's involved lysergic acid diethylamide

(LSD), while recent studies use a more diverse assortment of drugs, but tend to focus on psilocybin, the active ingredient in “magic mushrooms”. While there are certainly differences in both makeup and effect, LSD, psilocybin, and mescaline/peyote largely act on the brain in broadly similar ways: “all *classic* psychedelic drugs are agonists at the serotonin 2A receptor (5-HT<sub>2A</sub>R)” (Carhart-Harris, “The Entropic Brain”), which seems to trigger the psychedelic state. Consequently, I will use evidence predominantly from psilocybin research in this paper, as there is ample data surrounding it, and its effects are functionally and neurochemically extremely similar to those of peyote.

Second, “spontaneously occurring” mystical experiences seem to be similar enough to those induced by non-pharmacological means such as meditation that there is no meaningful experiential difference between the two, and recent research points the way toward neurobiological correlation as well. Roughly two thirds of participants in Griffiths et al.’s rigorous double-blind study (“Psilocybin Can Occasion Mystical-Type Experiences”) had “complete mystical experiences” according to ten separate empirically designed scales, and one third said that the experience was the most important spiritual experience of their lives. This is especially notable, as all participants claimed that they already had some degree of religious or spiritual activity in their lives; it underscores the gulf between many modern religious lifestyles and a primary mystical experience. Neurobiologically, Barrett and Griffiths have identified what they call an “intriguing overlap in neural findings on classic hallucinogens and neural findings on meditative practices that may occasion mystical experiences”. While this requires further study, it seems to point the way toward a common instigator of mystical experience involving

“decreasing connectivity within the default mode network, a system of brain regions that strongly interact with each other, and which supports internal focus” (Johnson and Griffiths). Chapter four will build on these neurological and phenomenological correlates. For the time being, it will suffice to mention William James’s descriptions of mystical states in *The Varieties of Religious Experience*, which argue that the validity of a mystical experience should not be judged by “...its origin, but *the way in which it works on the whole...*”. As such, we shall not discount the validity of a religious experience merely because it had its origins in the introduction of a foreign substance to the body.

### Entropy, for Good or Ill

Much of the research into the default mode network is being spearheaded by Dr. Robin Carhart-Harris, and involves a rejiggering of our ideas about consciousness itself; it suggests that brain entropy is an underlying factor in changing states of consciousness. Carhart-Harris theorizes that consciousness exists on a spectrum from rigid states of low entropy, such as deep sleep, depression, OCD, PTSD and addiction, to flexible states of high entropy such as the psychedelic state, infant consciousness, REM sleep/dreaming, and creative/divergent thinking, with ordinary waking consciousness somewhere in the middle (“The Entropic Brain”). This tracks with the knowledge that these diseases of rigidity “share common neural circuitry and have high comorbidity” (Ly et al.), and also with the fact that psychedelic experiences provide such uniquely effective treatment to them. The word “entropy” is carefully chosen, but at least in part refers to the fact that when in these states of associational non-ordinary reality, normally discrete parts of the

brain are in communication with one another, leading to thoughts outside of one's normal patterns. When the patterns are harmful, just one forceful experience of leaving these negative feedback loops (such as mystical experience) seems to have substantial lasting positive effects, as opposed to the "largely "palliative" treatment options" (Carhart-Harris and Goodwin) that have typically been used for diseases such as depression.

This paradigm of brain entropy is useful when thinking about possible mechanisms of the peyote experience being beneficial to the Wixárika, specifically because "the psychedelic state" and "creative/divergent thinking" are a part of the same end of the spectrum of consciousness. By this line of reasoning, when confronted with a new roadblock on the path to saving Wirikuta, an experience that encourages neural entropy such as ritual consumption of peyote could lead to an increase in creative problem-solving. Along the same lines, "it seems possible that enhancement of creative problem-solving ability may be a mediating factor [in psychedelic-assisted therapy], particularly in the treatment of end-of-life anxiety and addiction, as treatment for these conditions may involve learning how to think differently about an otherwise static issue" (Ly et al.). The neurobiological basis for this may lie partly in the inhibition of the aforementioned default mode network, which helps maintain a sense of orderly "self", and partly in increased levels of neural plasticity and neurogenesis that result from psychedelic experiences. Indeed, Ly et al. have found the entire class of serotonergic psychedelics to be so effective in promoting "structural and functional neural plasticity in cortical neurons" that they have coined a new term for them (along with the dissociative ketamine, which similarly activates the mammalian target of rapamycin (mTOR)):

“psychoplastogens”. Typically, it is quite difficult to promote this kind of neural activity; neurons tend to be largely fixed after childhood. There are very few chemicals that can help, most of which have significant drawbacks; that is part of the reason that depression and its related diseases, which stem in part from “atrophy of neurons in the prefrontal cortex (PFC) ... and is precipitated and/or exacerbated by stress” (Ly et al.), are so difficult to treat. This is what makes the “structural changes, such as the retraction of neurites, loss of dendritic spines, and elimination of synapses” that psychedelics can produce so powerful. (Psilocybin has been shown to provide “rapid and sustained anti-depressive effects” even to those whose illness has resisted other treatment (Carhart-Harris et al., “Psilocybin for Treatment-Resistant Depression”).)

The power can go both ways, however; making a brain more plastic is not *necessarily* a force for healing. While increasing a brain’s malleability in a supportive environment can undoubtedly help a patient escape fixed patterns, it also has the possibility of causing harm in an unsupported user. This is the essence of what Harvard-psychologist-turned-psychedelic-evangelist Timothy Leary was getting at when he espoused the concept of “set and setting”--- that both a positive mindset and the physical environment are vital to having a fulfilling experience. Practically speaking, this shows the importance of having a well-trained guide and an integrated belief and ritual system to make the experience cohesive. Equally compelling examples are the uniformly positive views that the Wixárika have about peyote experiences, with their profound peyote worship complex and deeply trained mara’akate, and the fact that in the current era of well-managed psychedelic therapy, there have been *no* reported “bad trips”

(Pollan, “The Trip Treatment”) in clinical settings. It seems that the belief system of medical psychiatry is a suitably convincing ritual container for safe and positive psychedelic experiences.

### Myriad Benefits

We have already seen that mystical psychedelic experiences can be helpful in resistance to alcohol abuse, in creative problem-solving, and in the treatment of depression and adjacent disorders. The mention of a few more of these drugs’ reported benefits is germane to the topic at hand. It has been shown that psilocybin users, especially those who experience “complete mystical experiences”, have long-term changes to their level of

... the modern personality construct of Openness, which encompasses aesthetic appreciation and sensitivity, imagination and fantasy, and broad-minded tolerance of others’ viewpoints and values... People with high levels of Openness are ‘permeable to new ideas and experiences’ and ‘motivated to enlarge their experience into novel territory’” (MacLean et al.).

The ease with which the Wixárika are willing to adapt to new means of resistance, even those which may go against their traditionally insular character, fits this description well and is an example of how the psychedelic amplification of the personality construct of openness to experience may explain the salutary social and political outcomes that ritual peyote use mediates.

Next, Carhart-Harris et al. show that psychedelic experiences increase feelings of connection; to others, to nature, to the world at large, and most importantly (in their eyes)

to the self; “*connection-to-self* is a bedrock from which connection to others and the world can follow most naturally” (“Psychedelics and Connectedness”). This too tracks for Wixárika success in the fight for Wirikuta; “Wixárika-ness” is an all-important characteristic among the group. A close connection with the natural landscape of Wirikuta, along with the route to get there, is vital to their tenacity in the ongoing struggle. Furthermore, their social connectedness and cohesion in the face of spiritual calamity is apparent in the willingness to band previously disparate communities together for a common cause.

Lastly, Wixárika mara’akate claim to glean information directly from peyote experiences “like a book”; as Juan Carrillo Carrillo puts it, “When you eat *hikuri*, those visions tell you how the gods were born, how Grandfather Fire is born, how you must act in your personal life, how you must protect your family, how you must protect the community” (*Last Peyote Guardians*). This comports with the idea, in modern terms, that the use of psychedelics can increase “noetic insight”, or “direct access to knowledge beyond that which is available through the five senses or through reason” (Hewitt). If deities are actively speaking to the Wixárika in a literal sense through the peyote experience, then the cactus seems to act as a neurochemical lubricant allowing for this noetic insight. The information gleaned concerns myriad aspects of the world (what we would call both sacred and mundane, but which for the Wixárika there is no distinction), including a host of strategies on how to preserve the sacred ground of Wirikuta.

I touched on the resistance to the diseases of neural stagnation (depression, PTSD, anxiety, obsessive-compulsive disorder, etc.) that psychedelic use seems to guard against,



which provides a general psychological resilience against both external and internal stressors. It is likely that this resilience has helped the Wixárika maintain a robust existence through the centuries. I will discuss this idea further in the next chapter, but it would certainly be beneficial on a society-wide basis if this regularly consumed sacrament serves as a sort of psychiatric inoculation against a host of maladies that plague the bulk of Western society on an epidemic level.

### “Psychedelic” vs “Mystical”

The definition of what actually entails a “mystical experience” is up for debate, and the need to objectively describe it in a rigorous way, such as with the 32-item “Hood Mysticism Scale” or the “States of Consciousness Questionnaire” may seem strange, especially as one of the central components of mystical experiences is “ineffability” (MacLean et al.) (e.g. “How would you rate the ineffability of your experience, on a scale of one to six?”). It is useful, though, to try to get at exactly what part of a psychedelic experience proves psychologically beneficial; there seems to be evidence that “mystically oriented” psychedelic experiences are more helpful than those without a mystical component, at least in some respects (MacLean et al.). Questions remain, however; trying to get at the tangled knot of mystical psychedelic experiences, non-mystical psychedelic experiences, and “religious practices not specific to mystical experience that might contribute to creative problem-solving enhancement”, Sweat et al. refer to the latter two as “sub-mystical experiences” (whereas Yaden et al. collectively refer to all similar experiences as “religious, spiritual, or mystical experience”, or *RSMEs*). The team points

out the underlying neurobiological correlates of, for instance, meditation and classic psychedelic drug administration; each has similar effects on blood flow into the default mode network as well as the distinct, “anti-correlated” task-positive network. While it is certainly important to explain the profundity of these spiritual experiences to a secular scientific culture, the phenomenological descriptors are lagging behind the complexity of the experiences themselves. Carhart-Harris et al. point out that future research could “determine whether [other] aspects of the acute psychedelic experience such as ‘ego-dissolution’... and ‘awe’ mediate the long-term positive effects of psychedelics” as well as mystical experience does (“Psychedelics and Connectedness”). Further understanding along these lines may prove helpful in, for instance, delineating between the peyote experiences of the mara’akame and those of the less rigorously trained Wixáritari. Perhaps the intensive, years-long training regimen primes a peyotist neurobiologically as well as spiritually for the full-throttle, knowledge-granting *Mysterium Tremendum*, instead of a merely “sub-mystical”, though still psychologically beneficial experience. This would also explain why, as I alluded to earlier, once a mara’akame is fully trained, he can access the divine through singing and dancing, without the direct aid of peyote; perhaps the training contributes to the growth of neural pathways through which the mystical state can be reached relatively easily. We are only at the very beginning of understanding the religious experience (no matter what it’s called) from a neurobiological point of view.

### Mystical Experience for Society-Wide Mental Health?

In an essay published in a 2018 special issue of *Neuropharmacology* devoted to the promise of psychedelic treatments of mental health, Belouin and Henningfield write that...

[t]he United States confronts today a mental health crisis that by many measures is not contracting; instead, it is expanding. The multi decade long erosion in our nation's overall state of mental health and our inability to sustainably alter the trajectory in treating mental health disorders such as treatment resistant depression, anxiety, addiction, and PTSD, has resulted in a steady-state depletion of our nation's internal intellectual, innovative, and economic capacity.

Perhaps it's not a coincidence that many of these mental illnesses that are reaching epidemic proportions and creating an "existential strategic threat within the United States" are the same illnesses that seem to be so effectively treated by psychedelic therapy. Hidaka makes the argument that depression, as much as cancer and type 2 diabetes, is a "disease of modernity". Acknowledging that depression likely has genetic, cultural, and chemical contributing factors, he shows a positive correlation in the emergence of major depressive disorder and the degree of modernization in society, which he describes as "the conglomeration of a society's urbanization, industrialization, technological advancement, secularization, consumerism, and westernization." The "secularization" of society, hidden in the middle of that list, is what especially concerns this thesis.

If the psychedelic experience is, as it seems to be, a uniquely effective treatment for severe depression and its related disorders, and if mystical experience brought on by

psychedelic experiences and those brought on by other means, such as deep meditation, are functionally identical, as they seem to be, than any mystical experience, whether brought on by rhythmic dancing, drumming, fasting, chanting, meditating, exogenous chemicals, or any other factor should have a positive effect on this array of mental health issues which seems to be precipitated (at least in part) by excessive neural rigidity. And, if this type of treatment addresses the neurochemical root causes of depressive disorders, rather than just the symptoms, then it stands to reason that regular, ritualized mystical experiences could serve as a preventative measure against their onset before they began to appear, rather than a merely post hoc treatment. Pre-modern societies around the world had, over centuries, developed techniques for directly accessing the divine using the above (as well as countless other) methods. Carhart-Harris and Nutt have hypothesized that this type of neurochemical experience would provide an evolutionary benefit for psychedelic usage--- that a “state of rapid plasticity that is conducive to major change (e.g. in outlook and/or behaviour)—when such change feels necessary (e.g. to aid mental or physical survival) [provides a] function [which] may be related to humans’ unique capacity for adaptability.” Given the above, the insight gleaned from *any* mystical experience should prove similarly beneficial, which would account for an evolutionary rationale for mystical experience. Given the emphasis put on direct religious experience in archaic religions around the globe, this is a potentially important piece of understanding of the co-evolution of humanity and religious ritual; that regular mystical experience makes a population more adaptable, resilient, and generally in possession of better mental health. I will delve into what this means on a society-wide level in the

following chapter, but for now let me reiterate that the modern mental health epidemic seems to be an example of what happens when a society gets away from this regular, ritualized mystical experiences.

This chapter has focused on some of the neurobiological and psychiatric benefits of well-supported psychedelic use, and how these benefits are apparent in the Wixárika fight to save their spiritual homeland of Wirikuta. It followed that up with evidence that mystical experiences are broadly similar regardless of what instigates them, and speculation on the role that mystical experience may have traditionally had in maintaining societal mental health. In the next chapter I will tack back to the humanities, and tie this neurobiological information together with anthropological and theological ideas, especially Victor Turner's concept of Structure and Anti-Structure. While this chapter has summarized existing scientific data and projected it onto the Wixárika's situation, below I continue to hold this data up to an existing theory of large-scale societal success to deepen the supposition about the vital importance of mystical (or mystical-adjacent) experiences to societies around the world.

## Chapter IV.

### Entropy as Anti-Structure

While the last chapter began to connect Carhart-Harris's conception of neural entropy as a fundamentally important brain state with both Wixárika cultural adaptability and the more general importance of mystical experience, this chapter will look to an anthropological theory as a way of emphasizing the potentially far-reaching implications of the recent body of research. Religious scholars were fairly involved with the first wave of psychedelic research in the 1960's; one well-known example is the "Good Friday Experiment" performed by Harvard Divinity School student Walter Pahnke, which involved administering psilocybin to other members of his cohort in the basement of Marsh Chapel as a Good Friday service from upstairs was piped in. While flawed (Doblin), it systematically demonstrated a relationship between psychedelics and "genuine" mystical experience for the first time in the modern era (Pahnke). In this chapter I continue in this mode of connecting scientific research with the humanities, by connecting the emerging neuroscience discussed in the prior chapter with the wide-ranging theories of the great ritual anthropologist Victor Turner. Below, I explain Turner's ideas of structure and anti-structure, and how the concept of *communitas* can bring about the latter, which he claims is necessary for social health. I will then show that they are a useful lens through which to look at not only the successes of Wixárika cultural

survival, but at the emerging theory of neural entropy as well. While many societies contain rituals which bring about *communitas* experiences, the Wixárika's peyote ritual, which is incredibly deeply ingrained in their culture, so potently instigates anti-structure (and the neural entropy that goes along with it), it seems to have helped them avoid the common cultural trap of excessive societal structure.

### Structure, Anti-Structure & *Communitas*

Turner's understanding of structure and anti-structure are related to his interest in two other concepts: *liminality* (borrowed from van Gennep), the state of being either ritually or societally at a threshold, and *communitas*, a sort of sacred "modality of social relationship" (*Ritual Process* 96) which he says tends to emerge in liminal states (*Dramas, Fields, and Metaphors* 232). Turner breaks the latter down into three separate types; *existential* or *spontaneous communitas*, *normative communitas*, and *ideological communitas* (*Ritual Process* 132). While a complex subject, it is through the differentiation between these three sub-categories of *communitas* that Turner's idea of cultural health can be made out; he uses the example of the Franciscan order to illustrate it. St. Francis of Assisi lived his life in a state of frequent spontaneous *communitas*, experiencing rapturous communion with nature and humanity while communicating primarily through symbol and parable (*Ritual Process* 142). As he gained more followers, though, he felt "...the need to mobilize and organize resources, and the necessity for social control among the members of the group in pursuance of these goals..." (*Ritual Process* 132). Francis insisted on Christ-like poverty in an attempt to help others achieve

his way of direct being-in-the-world; his immediate followers likely experienced normative *communitas*, a more structured version of the experience, which may or may not have the same profound mental impact as the spontaneous/existential variety.

Unfortunately,

...his imaginative notion of poverty as the absolute poverty of Christ was hard to sustain in practice by a social group forced by the Church to institutionalize its arrangements, routinize not merely the charisma of its founder but also the *communitas* of its spontaneous beginnings, and formulate in precise legal terms its collective relationship to poverty (*Ritual Process* 146).

This would refer to ideological *communitas*, when a group is united by the inspiration of someone who experienced existential *communitas*. Its members lead lives that are influenced by the realizations brought about during these primary religious experiences, but do not necessarily have them for themselves. As the group became increasingly structured after Francis's death, it increasingly lost its connection to existential *communitas*, with the definition of "poverty" becoming ever looser (*Ritual Process* 149), to the point that the modern Franciscan brotherhood bears little resemblance to his original group, in the same way that no mainstream Christian church retains a great deal in common with the way Christ and his disciples lived--- a lifestyle which Francis attempted to emulate. There seems to be a pattern, then, of a revelatory *communitas* experience, which, because it is difficult to guarantee to followers, becomes a "stereotyped and selected liturgical form" (*Dramas, Fields, and Metaphors* 248) in an increasingly structured religio-social group.



It is in opposition to this increasing *structure* that tends to befall a society that Turner conceived of the concept of *anti-structure*--- not a negative trait, but a sort of a mystical synonym with the idea of existential *communitas*--- a radical openness, a dissolution of boundaries. Speaking of the two poles, Turner explains that “the basic and perennial human social problem is to discover what is the right relation between these modalities at a specific time and place” (*Dramas, Fields, and Metaphors* 266). Extremely relevantly to the topic at hand, he goes on to say that “[p]eople can go crazy because of *communitas*-repression; sometimes people become obsessively structural as a defense mechanism against their urgent need of *communitas*.” Having “urgent need of *communitas*” seems to be another way of saying “existing in the modern condition”; living in a profane, capitalist, precarious, decidedly non-mystical world. “In human history, [Turner] see[s] a continuous tension between structure and *communitas*, at all levels of scale and complexity” (*Dramas, Fields, and Metaphors* 274). “Societies which stress structure--- and establish mystiques of hierarchy and status, setting unalterable divisions and distances between categories and groups of human beings--- become equally fanatical in the eradication of *communitas* values and the liquidation of groups which outstandingly exemplify them” (294). In the next section I will discuss how the Wixárika seem to be a prime example of a “group which outstandingly exemplifies” Turner’s *communitas* values; indeed, how they have managed to resist “liquidation” is one of the primary thrusts of this thesis.

To summarize a part of the prior section, and add my own interpretation--- St. Francis, who led a life filled with existential *communitas*, attempted to create guidelines that allowed his followers to similarly experience the world. A life committed to poverty and deep meditation is difficult to maintain, however, and the direct mystical experiences it could help to bring about may only emerge after years of dedicated practice. Combined with a highly structured church wary of its radical suggestions, the Franciscans soon shed their most extreme (and vital) tendencies. Turner suggests that this drift is emblematic of all religious movements, as well as societies based on them.

My argument, then, is that a large part of why the Wixárika have maintained such a vibrant, adaptive culture is that they have maintained a regular, guaranteed means of inducing *existential communitas*, by way of ritualized peyote consumption. The act of frequently experiencing chemically-assisted states of neural entropy in a reassuring, well-established ritual framework assists the population in coming up with novel solutions to a host of problems, whether it is how to resist (decidedly structured) Franciscan conversion attempts or a Canadian mining company bent on befouling their spiritual homeland. As we have seen, the Wixárika campaign to save Wirikuta has consisted of a wide array of techniques. The seemingly disparate techniques include a mountaintop prayer summit, civil disobedience against the mining company, petitioning both state and national governments in a legal approach, and working to gain both local (via an information campaign) and international (via a benefit concert) public support. It is a truly remarkable combination of ancient and modern efforts for a small group of people in a country not historically compassionate towards its indigenous groups. The

Wixárika say that they glean insight from peyote rituals; it seems likely that the neural entropy created by the peyote ritual, along with the anti-structural thinking it engenders, contributes to the open-mindedness necessary to attempt this wide range of resistance techniques.

The peyote experience likely also contributes to feelings of connection to one another and the world at large, as well as likely many of the other benefits listed in the prior chapter. This would explain the willingness of the Wixárika to band together as a cohesive “tribe” for the first time in modern history; a recognition that new social and political patterns must be forged to respond to this novel problem and save not just their own lifeways, but humanity as a whole. Likewise, the propensity of psychedelics-users to feel a greater connection to the natural world likely contributes to the incredibly strong feeling of stewardship for the environment, on both a local and global level. When the Wixárika talk about the struggle for Wirikuta being an existential struggle, it may be a literal one in this sense; if the peyote experience guarantees “spontaneous” *communitas*, then Wixárika culture and religion (which are indeed inseparable) need never resort to normative or ideological *communitas*, and Wirikuta is their source for this sacrament. So--- they are doing everything they can to save not just what symbolically holds them together, but, as we have seen above, what concretely contributes to cultural survival.

Lastly, there is evidence that focused ritual activity is a potent instigator of resilience against stress, as well as concomitant resistance. Hegland, for instance, shows that Peshawar Shi’a women, by attending group mourning rituals, “formed a realm of contention and negotiation over gender power, control, and change...” in the late 1980’s

(65). This newfound group solidarity helped them push back against patriarchal oppression, through small but meaningful modes of subversion. To project my thesis onto this example, it is likely that these sustained rituals, which encompassed activities such as prolonged chanting and self-flagellation, brought about the necessary neurobiological changes that come with mystical experiences, and the structured settings allowed them to be integrated properly. This allowed the women to “transform self-concepts, imaginations, and world-views within a protective framework” (72); once again, we see the likelihood of internal psychological changes prefiguring the social.

Taken all together, then, we can surmise that highly developed Wixárika peyote rituals seem to be society-wide psychopharmacological interventions which bring about increased cognition, which leads in turn to generally heightened cultural resilience. In Turner’s terminology, this could be described as regularized anti-structure, to constantly balance out the structure that is just as necessary for a society to remain healthy. In an organization like the Christian Church, this swing of the pendulum might require a periodic charismatic leader who more “spontaneously” experiences existential *communitas*, then spreads the knowledge gleaned from a mystical experience to followers, which will lead to the spread of normative *communitas* for a time. The process is sped up, though, when many members of a community have the means for speaking with deities on a regular basis, as the Wixárika do; the scale of societal response and self-correction is significantly shorter.

In what seems to be Turner’s only published mention of the Wixárika, the introduction to Myerhoff’s *Peyote Hunt* (7-10), he does clearly state that in his opinion,

they do, as a people, strongly exhibit *communitas*, and that the peyote hunt aids in its realization: "... the Huichol Pilgrims, transformed into gods, become essentially more human in their relationships with one another on the pilgrim way and during their brief stay in the inverse world of Wirikuta." (10) Perhaps understandably due to his academic area of specialty, though, he focuses on the ritual aspect at the exclusion of the biological. Even beyond Turner's particular affinity for ritual, this point of view is symptomatic of much of academia from the time immediately following the "psychedelic era" of the late 1960's to the modern resurgence of research in the past decade. Even though a tremendous body of scientific research into the psychological effects of psychedelic drugs already existed (Belouin and Henningfield), many were hesitant to discuss it; the field had become taboo.

Turner does acknowledge the importance of peyote to Wixárika ritual life, but he is dismissive of the actual contribution that consumption could make toward communal feelings; like many, Turner puts undue emphasis on the famous "hallucinogenic" visions themselves (9), and ignores the more intangible psychological benefits that modern research has shown can outlast the experience. He even insinuates that peyote consumption may contribute to the creation of boundaries, rather than the reduction of them:

Its power is regarded as a divine gift, a sacred trust; the visions it gives are not to be spoken of. They are of and for the inmost self. Though the plant may be consumed in common, there is no communion; each has its own vision... It is not made to invade the pragmatic world of work--- it is part of the "work of the gods," as Christian Communion wine is part of the "divine work" of the liturgy. (9)

It's certainly an oversimplification to say that "there is no communion" in peyote consumption; beyond the spiritual communion with ancestors, deities, plants, animals, the landscape, etc. that peyote consumption reportedly engenders, those who partake report a very definite transmission of ideas about how to engage with their communities at large; see activist Juan Carrillo Carrillo's words on learning from peyote how to protect his community in Chapter III. Beyond that, though, Turner displays a Western/Christian bias in this approach, which is endemic to academic discussion of psychoactive religious sacraments. For instance, he makes a hard distinction between the sacred and the secular, when in pre-modern cultures, including that of the Wixárika, there is much less of a divide; sacrality exists on a spectrum that pervades all aspects of life (Furst 2). Furthermore, as Carrillo intimates, the knowledge gleaned from a peyote experience certainly does cross over into the "real" world; it is not sealed off, as might be true with Christian communion. Relying on the Christian analogues of various aspects of novel religions to better understand them is a trap that even a scholar as sensitive as Turner can fall into. In this section I have shown how Wixárika society fits neatly into Turner's theory about the importance of finding a balance between structure and anti-structure. In the next, I will examine another (sub)culture who also placed an emphasis on the use of psychedelics, and compare and contrast the two for the benefit of my larger argument.

### Victor Turner and the Hippies

It is initially somewhat jarring to realize that Victor Turner wrote a significant amount about the hippies of Haight Ashbury (e.g. *The Ritual Process* 112, 138, *Dramas*,

*Field and Metaphors* 244, 246, 261-265), being ostensibly far outside his wheelhouse of studying the Ndembu of Zambia. In truth, though, the subculture does line up nicely with Turner's lifelong examination of ritual and social drama. In *The Ritual Process*, for instance, he writes that the values of *communitas* are "strikingly present" in hippie culture; lacking

...the advantages of national *rites de passage*--- [they] "opt out" of the status-bound social order and acquire the stigmata of the lowly, dressing like "bums," itinerant in their habits, "folk" in their musical tastes, and menial in the casual employment they undertake. They stress personal relationships rather than social obligations, and regard sexuality as a polymorphic instrument of immediate *communitas* rather than as the basis for an enduring structured social tie... The "sacred" properties often assigned to *communitas* are not lacking here, either... The Zen formulation "all is one, one is none, none is all" well expresses the global, unstructured character earlier applied to *communitas*... While our focus here is on traditional preindustrial societies it becomes clear that the collective dimensions, *communitas* and structure, are to be found at all stages and levels of culture and society. (112-113)

Turner connects hippies with counter-cultural mystics from around the world. He doesn't make the important connection, though, that hippies were the most prominent modern American subculture engaging in widespread psychedelic use, which, as we've seen, can reliably induce anti-structural experiences. While it's possible, as Turner mentions off-hand, that an affinity for "'mind-expanding" drugs, "rock" music, and flashing lights" is one *result* of spontaneously occurring *communitas* (*Ritual Process* 138), it is more likely that the opposite is true, based on the evidence we've examined above. Carhart-Harris spoke to this in an interview about his work, suggesting that the millions of chemically-induced mystical experiences in the 1960's and 70's were the germ from which sprang the unique spiritually, socially, and politically engaged

counterculture: “Was it that hippies gravitated to psychedelics, or do psychedelics create hippies? Nixon thought it was the latter. He may have been right!” (Pollan, *How to Change Your Mind* 315)

It is difficult, now that the “Woodstock Generation” has been stereotyped and monetized for fifty years, to conceive of hippie culture as it deserves to be thought of: a radical movement which substantially broke, for a time, with mainstream society. A cursory look, however, reveals many of the characteristic results of mystical experience this thesis has been examining (beyond their much lauded artistic creativity). Among many blossoming avenues of political engagement, a deep sense of connection with humanity seems to have manifested in the anti-war movement, just as feelings of connection with nature resulted in a renewed environmentalism. As historian Adam Rome puts it:

Drugs helped. Indeed, the desire to return to nature was a driving force in the drug culture of the 1960’s... The experience of the writer Geoffrey O’Brien was typical. On drugs, he went to “the wilderness”. He felt in tune with the rhythms of the “stars, migratory patterns, planting cycles, the chirping of insects”. Nature talked and he listened, in ecstatic communion. (543)

Similarly to contemporary Wixárika society, both movements benefited from novel means of resistance, including a combination of public actions and legal maneuvering, and resulted in genuine victories (Rome 551). It cannot be coincidental that this cultural exemplar of anti-structure in the modern world which Turner repeatedly singles out is the group that practiced what this thesis is arguing is instrumental to society-wide *communitas*: widespread, chemically induced mystical experiences. One



important difference, however, between Wixárika society and the hippies in their heyday is the existence of a ritual framework--- a structure to orient the destabilizing effects of the psychedelic anti-structure.

This would begin to explain the much-discussed “dark side” of the hippie era, including “bad trips” leading to mental distress, addiction to “hard” drugs such as heroin, and drug-related violence such as the infamous Manson murders; the boundaries of mainstream society were dissolved, with nothing to replace them. The dissolution led to the aforementioned positive attributes of the hippie world, but also points towards the relatively quick dissolution of the subculture as a viable entity; it was difficult to fabricate a new society based on mystical realizations out of whole cloth. Countless psychedelic wanderers took Timothy Leary up on his catchphrase and simply “dropped out” of society, creating isolated communes or rural homesteads. Nevertheless, the strong instinct for a balancing structure materialized in the widespread investigation of non-Western spiritual traditions, such as the Buddhist, Hindu, and indigenous American traditions that found adherents among those who got a taste of existential *communitas*. The Wixárika, however, have the advantage of having a centuries(if not millenia)-old socio-religious structure to orient the potentially destabilizing effects of peyote consumption, and help contextualize the neural entropy it can bring about in the service of social good. Wixárika youth are brought up from a young age hearing about the sacrality of peyote, with years-long training for *mara’akate*; Wixárika society is intricately tied up with a belief system that pays deep reverence to the peyote experience.

### Turner's and Carhart-Harris's Similar Scales

In this chapter, by explaining Victor Turner's theory of structure and anti-structure and how existential *communitas* leads to the latter, I have finished shaping my argument that Wixárika resistance and resilience is aided by peyote-induced mystical experiences. It is useful for my purposes that Turner's concepts have loose cross-disciplinary analogues; the spectrum of cultural structure lines up remarkably well with the aforementioned scale of neural rigidity. Just as, in Turner's telling, healthy societies need regular "doses" of both structure and anti-structure, modern neurobiology hypothesizes that a healthy brain needs regular doses of both rigid and entropic states of mind. While Turner could not have known that his theory had neurobiological underpinnings, it is remarkable that (to cross disciplines) neural anti-structure seems to lead to sociocultural anti-structure. Clearly, this phenomenon is not only related to psychedelic usage; many rituals from around the world have the power to bring about similar *communitas*-inducing states. As Eliade put it in the subtitle of his classic book on shamanism, they can be thought of as "Archaic Techniques of Ecstasy". As I mentioned above, drumming, dancing, fasting, meditating, sleep deprivation, participation in religious theater, etc--- all are known for the ability to bring about mystical states. While the neurobiology of these experiences has not been studied with the same modern rigor as psychedelic usage, I suspect that each leads to similar results in the brain, and hence to psychological health as well as cultural resilience. My final supposition, then, is that the panoply of ritual activities that were developed around the world in pre-modern times

alongside accompanying belief systems emerged at least in part as a means for ensuring psychological and cultural health. In Victor Turner's terms, this could be stated as guaranteed means of experiencing existential *communitas*.

This could provide an evolutionary benefit (survival and reproduction across generations) for those who regularly engaged in anti-structural behavior; the Wixárika of today are an example of this kind of resilience, adapting to new challenges while maintaining cultural traditions and showing a high degree of connectedness. Many of these techniques, though, largely disappeared as Western culture's hegemony increased, both because populations were forcibly prevented from practicing them and they did not jibe with a Christian, capitalist society. Beyond contributing to what appears to be a mental health epidemic (e.g. Twenge, Hidaka, Higgins), this lack of connection with the rest of humanity (as well as the natural environment) has led us as a species to the brink of existential catastrophe, most pressingly represented by the climate crisis. How have the Wixárika been able to avoid this trap of losing their guaranteed means of anti-structural *communitas*? At least part of the answer seems to lie in the potency of the peyote experience; as demonstrated in recent trials and mentioned above, just one well-supported psychedelic experience can have profound positive changes on a person's mental health. Likewise, there is ample research showing that cognitive flexibility, along with the new associations it can bring about, is a significant predictor of psychological health (Ben-Zion et al., Morris & Mansell, Waltz). These various cross-disciplinary scales, along with their corresponding terminologies, certainly need to be synthesized more rigorously; for instance, perhaps these concepts of structure, anti-structure, entropy,

flexibility, and rigidity can all be folded in to the autism-psychosis continuum, a long-gestating conception of mental health that posits that the two diseases exist at opposite poles of consciousness, with the entire continuum of mental health in between (Derosse & Karlsgodt).

While more work remains to be done on the neurochemistry of various types of mystical experience, it seems likely that peyote, even more so than the other ritual “technologies” for transcending ordinary reality, is particularly well-suited to helping a population stand up to the dominance of a destructive society. Though speculative, these claims are built from a grounding of neuroscientific evidence and a combination of various types of anthropological and journalistic information, and much more data is needed before the topic can be discussed with greater certainty. I will discuss possible future work, as well as shortcomings in my own argument, in the next and final chapter.

## Chapter V.

### Conclusion

This thesis began with a question: How is it that the Wixárika--- a small indigenous group residing in the rural Sierra Madre Occidental range--- have been able to fend off the concerted efforts of a multinational mining corporation and the Mexican government to prevent a modern silver mine from being dug in their ceremonial homeland? There is a wide array of native resistance campaigns across the world; certainly the Wixárika are not the only ones to successfully resist foreign extractivism, but by and large, it is not an arena which typically gladdens the hearts of those who side with indigenous rights. I was curious--- is it just chance, luck, or circumstance that separates successful movements from those that don't result in any meaningful gains? The 2016 protests against the Dakota Access Pipeline were fresh in my mind as I began to think about the topic, being the most prominent recent example of a similar movement in the United States; even the substantial media attention and ensuing material contributions weren't enough to stop the pipeline from being constructed. Acknowledging that circumstances differ in every scenario, I wondered if there might be anything intrinsic to Wixárika culture that contributes to their ongoing varied and successful resistance strategies. This thesis is a result of my investigation, and has attempted to provide an answer.

First, I briefly described the ethno-history of the Wixárika, gesturing towards why the peyote that grows in their ceremonial (and likely historical) homeland, Wirikuta, is so vital to their tribal identity. I then outlined the contours of the struggle for Wirikuta so far, including the Wixárika being in the difficult position of having to fight for the rights of a landscape far outside their “everyday” homeland. Next, I discussed some of these efforts which are especially novel for a society which has largely survived by avoiding conflict (and even, as much as possible, contact) with the outside world: lawsuits, civil disobedience, and a massive, attention-drawing benefit concert. Recognizing that they would stand a better chance as a united front against this existential threat, the typically autonomous communities joined together to organize resistance among the entire population, and marshal the collective force of organized prayer. Outside partners and advisors were also brought in, another new tactic for this normally insular population. The power of the internet was taken advantage of, with the *Consejo Regional Wixárika por la Defensa de Wirikuta* issuing regular proclamations, keeping the world at large informed about its struggles through a regularly updated website and Twitter account.

No mines have been dug, and yet the struggle to save Wirikuta continues: it was as I was beginning work on this thesis that key community activist and mara’akame Margarito Díaz González was murdered in his home by unidentified gunmen, as I mentioned in Chapter II. Having moved on from the ostensible stalemate of the First Majestic mine, he was leading a legal injunction against the construction of the *La Moroma* dam, which will threaten Wirikuta’s water supply. There does not seem to have been an investigation into the death (“Lamenta CNDH Homicidio de Líder Huichol”);

earlier, local opposition leaders had reported harassment from both state and federal water officials, and construction of the project had been a part of President Enrique Peña Nieto's re-election campaign ("Opponents of San Luis Potosí dam project"). Clearly there is no such thing as outright "victory" for a society in as precarious a existence as the Wixárika, but they seem to cohere and remain resilient even in the face of such violence.

A great deal of the ethnographic literature focuses on the key place that peyote holds in Wixárika society, and the centrality of the deer-maize-peyote complex in their cosmovision affirms this. The Wixárika themselves say that peyote contributes to their understanding of the world, and gives them direct information. Combined with the fact that, among other reasons, Wirikuta's importance in Wixárika society is related to the peyote that grows there, the cactus seemed worth investigating closely. Fortuitously, the last several years have seen an explosion into research on the neurobiological benefits of such psychedelic substances, so this was an avenue that could not have been explored in this manner until quite recently. In Chapter III, I laid out some of this research, and showed how indeed, the Wixárika seem to be utilizing many of these psychological benefits that result from well-supported peyote ingestion.

For instance, psychedelics can increase novel problem solving, a phrase which certainly can be used to describe the combination of traditional and modern tactics that the Wixárika employ in their resistance campaign. Benefits can also be seen, as I showed, in their reduced alcohol use and heightened feelings of social and natural connectedness. While new enough that much of this research is unsettled, an emerging theory is that psychedelic experiences exist on one, more entropic, side of the spectrum of

consciousness, with diseases of stagnation such as depression, anxiety, and PTSD on the other, and “ordinary reality” somewhere in the middle. This is one reason, according to researchers such as Carhart-Harris, that psychedelic therapy is so effective against these diseases; it provides a counterbalance against neural rigidity, jolting a brain into new thought patterns. Furthermore, additional research shows that mystical experiences seem to be neurobiologically and phenomenologically similar whether the source is ingestion of chemicals or focused practice of spiritual techniques such as meditation; to project this onto the above, it would imply that “spontaneously occurring mystical experiences” likewise exist on the end of the spectrum of consciousness alongside psychedelic states, in addition to REM/dreaming sleep, and, at the outer edge, schizophrenia. While researchers such as Carhart-Harris have suggested that occasional forays into psychedelic states may have an evolutionary benefit, especially when it comes to increasing problem-solving ability, I suggest that one can go further and make similar statements about the importance of experiencing neural entropy regardless of the source. I speculate that this may relate to the vital importance of dreaming, which is experienced in REM sleep, and also that this is one reason church-going populations tend to have lower incidences of mental illness. While there is still substantial work to be done on what, exactly, makes up a mystical experience, and where the the boundaries of “mystical”, “sub-mystical”, “psychedelic”, etc. might be, it seems likely that any kind of focused ritual activity would at least nudge the brain towards the entropic side of the spectrum, benefiting all those involved. I further speculate that the mental illness epidemic which is currently gripping the west springs from, at its root, the removal of these kinds of primary



religious experiences from society, with nothing comparable to replace them. It is likely that modern therapies such as psychoanalysis are successful at least in part because they urge paying close attention to unconscious states such as dreams; this well-mediated emphasis on an entropic state of mind is a balm for the secular, over-rigid modern world. Wixárika society has maintained a guaranteed way to instigate this kind of neural revitalization, and therein lies its strength.

In Chapter IV, I projected the theory of neural entropy onto Victor Turner's theory of structure, anti-structure, and *communitas*, showing that it is essentially an anthropological correlate of the former. The two scales can be placed on top of one another, with entropic modes of consciousness being of a piece with Turner's *communitas*, which brings about anti-structure. The idea of having an abundance of anti-structure, then, can be used interchangeably with having an abundance of neurally entropic experiences to explain why the Wixárika have been able to remain as culturally vibrant as they have, and respond to new challenges so successfully. Their well-organized peyote rituals themselves are microcosms of what Turner says is necessary for a society to thrive: the orienting structure of the ritual balanced by the anti-structural experience of the sacrament itself. Without a grounding container such as the extremely well-developed Wixárika belief system, psychedelic adventurers run the risk of destabilization (i.e. the much-discussed phenomenon of "bad trips") or worse, such as the triggering of latent schizophrenia.

### Shortcomings in the Theory & Suggestions for Further Research

Certainly, some of this thesis is speculative. I am not presenting any new data; I did no field research and performed no clinical trials. In some ways, this is an advantage, as it allowed me to take a wider view than a paper dealing solely with ethnography or clinical results would be able to. I have attempted to draw equally from anthropology, ritual theory, religious studies, neuroscience, and contemporary news sources to connect the dots in a way that do not seem to otherwise have been connected. My hope is that I have provided specific examples whenever necessary to bolster my argument, but the breadth of areas being discussed means that certain points I've made are anecdotal rather than definitive. I would welcome, for example, a more systematic study of indigenous resistance, either in Mexico alone, across Latin America, or even worldwide. This could be helpful in either confirming or refuting my hypothesis that those societies with extant rituals which induce anti-structural experiences (especially those powerful mystical experiences which are brought about by psychedelic substances) are more likely to achieve success in resistance to extractivism and other challenges than those who have lost these traditions. It must also be acknowledged that as an outside scholar, there is a limit to my understanding of Wixárika society. I would welcome the chance to work collaboratively with members of the Wixárika community for a multitude of reasons, most especially to round out whatever inaccuracies and gaps in my understanding are present in this work.

More information on how psychedelic usage affects mental health in the long term would also be helpful. Even though regulations are beginning to loosen on the study

of these substances, it is still difficult to initiate rigorous large-scale studies. One retrospective analysis of National Survey on Drug Use and Health results shows that even unstructured psychedelic consumption correlates to reduced mental health problems in the population at large (Krebs and Johansen), and even more germanely to the topic at hand, a study of Native American Church members who have consumed peyote at least 100 times have significantly better general mental health than a control population (Halpern et al.). Both studies are helpful, but imperfect; an ideal one to investigate my hypothesis would compare the long-term mental health effects of ritually mediated (or otherwise structured) psychedelic experiences, un-mediated psychedelic experiences, non-chemically-induced mystical experiences, and a control group.

Another weakness of the paper is the uncertainty of terminology, as mentioned above; there is still a haziness about the differences between “psychedelic”, “mystical”, “religious”, or “spiritual” experiences, and it is easy to slip between them, as I have done. Perhaps a *P* could be added to Yaden et al.’s *RSME*’s, making them “Religious, Spiritual, Mystical, or Psychedelic Experiences”. This would reduce the need to distinguish between them as discrete experiences, and also emphasize the similarities. It could be especially helpful if further research continues to show correlations in both neurochemistry and positive psychological results between psychedelically derived and “spontaneous” mystical experiences. This is certainly an area ripe for further investigation, particularly as they all relate to the Entropic Brain model of consciousness. The idea that all of these experiences (as well as dreaming) which appear on the less structured side of the spectrum contribute to mental health and general well-being is intriguing to say the least;

more work could be done to consolidate them into one cohesive description of them all, both neurochemically and phenomenologically. It would be especially interesting to see how the host of experiences that could be called “sub-mystical” relate from a mental health standpoint, such as rock concerts, church services and yoga classes.

On a related note, it would be interesting to study the neurochemistry and psychological health of fully trained Huichol mara’akate and those Huichol who haven’t undergone the shamanic training, but still consume peyote regularly. As mentioned above, while all peyote use is undergirded by the plant’s divinity, only the prior fully communicate with deities during peyote rituals, while the latter reportedly tend to have personal and more purely enjoyable experiences. Furst relates how all those who go on a pilgrimage to Wirikuta are “low level” shamans (151); to become a fully fledged mara’akame, though, one must make the journey at least five times, all the while undergoing increasingly intense spiritual training:

...accumulation of spirit power, in geometric progression, through repeated and ever more intense metamorphosis. “Completing oneself” is really progressive minimization of matter and maximization of spirit to the point where temporary transformation makes the transition to spiritual exultation and apotheosis (*Flesh of the Gods* 152).

(One cannot help but think of the similarities between this language and that which Carl Jung used to describe his concept of *individuation*, which again points towards psychoanalysis being a modern cognate of shamanism, guiding people through unstructured experiences such as dreams in a ritualized way.)

Furthermore, though extraordinarily divine, peyote is not used only ritually; it is also used as a medicine for a number of physical ailments, chewed for energy

while working in the field, and at least occasionally recreationally (though with a cosmovision as imbued with the divine as the Wixárika one, the meaning of “recreation” is undoubtedly different from that in a secular society). This presents a counterargument to my own: I have emphasized the importance of a ritual container for psychedelic use, but my main example contains its own exception! To this, I would reply that when consumed non-ritualistically, a) the dosage is likely much lower than in a fully fledged mystical experience, perhaps more akin to the “micro-dosing” of psychedelics that is just beginning to enter the scientific record (e.g. Prochazkova et al.), and b) it seems likely that even when not using peyote in a ritual manner, the context for its divinity is present (along with prior ritual experience), standing in the way of any potentially destabilizing effects.

This points to another problem, however; what lessons can be learned from my hypothesis? Much of this paper has dealt with the benefits that anti-structural experiences can have on the psyche. True existential *communitas* experiences, however, are not common in much of the secular west. The majority of the population in, say, the United States, is no longer in touch with cultural rituals that bring about profound neurobiological entropy (which I have hypothesized has contributed to the mental health epidemic). What are we to do with this idea, then, that these profound experiences are beneficial to mental health? I want to be clear that I am not advocating the widespread consumption of peyote; first of all, it is a slow-growing plant, and there is evidence that it is already suffering from improper harvesting practices and habitat loss (Feeney). Furthermore, although much less likely than popular culture would suggest, negative or

harmful experiences are certainly possible for un-supported, non-ritually mediated psychedelic experiences. It is undeniable, though, that it is a deeply ingrained desire across humanity to escape from non-ordinary reality; societies around the world have developed sophisticated ways to do this, both chemically and otherwise. The prior consists of everything from consumption of alcoholic beverages (which occur spontaneously from the consumption of sugar by wild yeast, and was thus likely among the first intoxicants) to complex combinations of plants such as ayahuasca, which requires two separate species to have any effect and often consists of many more. In traditional societies, these drugs tended to be consumed ritualistically, and have long been tied up with religion. Indeed, religious anthropologist Weston La Barre has argued that *all* religion springs from shamanic origins, as movements led by people who experience what we might call experiential *communitas* (261). He acknowledges that these experiences can be brought about by a variety of means, but that plant sacraments hold a special power, and have undoubtedly been tied up with religion for millennia. He writes of American Indian adoption of peyote to bring about trance: “Under the religio-cultural inspiration of shamanism, they still sought the actively psychotropic drugs that ensure this state. Their cognitive map was that of mystics, perhaps, but it was also pharmacodynamically pragmatic: *some plants house spirits and psychedelic forces* (278).”

This conforms to my hypothesis: that while there are a host of techniques that can lead to similar mystical encounters and concomitant psychological benefits, psychedelics are uniquely positioned to cut through the static of the secular modern world to deliver

them. Many of these techniques either require prohibitively long periods of focus to bring them about, or are generally unpleasant; while it is easy to imagine, for example, that a Mayan shaman-king performing ritual genital bloodletting with a stingray spine could bring about a state of non-ordinary reality, it is more difficult to imagine it becoming a millennial trend in the same way that flying to the Amazon to engage in ayahuasca rituals has. As I mentioned above, data shows that one potent, well-supported psychedelic experience can have a long-lasting positive impact on the psyche. While there are surely countless people who try, say, meditating, and quit because they do not feel any immediate benefit and are put off by the daily discipline its practice requires, it is very likely that someone who consumes an adequate portion of psychedelics in a proper environment will have an experience of existential *communitas* on their first go.

Out of necessity, though, the bulk of the recent boom in psychedelic research has been focused on mental illness. This doesn't comport with how these substances have been used around the world for millennia--- and therein lies a sticking point. Even if, as seems increasingly likely, these kinds of psychoactive substances are headed to a less restrictive scheduling by the FDA, it will likely be solely as a clinical tool. While it seems that psychotherapeutic support can provide the structure needed to fully and safely make the most of psychedelic mystical experiences, professional therapy is often only an avenue of the affluent. Conversely, it may be the most vulnerable members of society who could most benefit from the organized use of these substances. The syncretic Native American Church is an example of this; it provided an otherwise marginalized group a cause to rally around, and a guaranteed, potent means of mystical experience which

effectively contributes to the sobriety of its members. The process by which NAC members pushed for the legalization of their own peyote rituals is beyond my scope, but it is instructive that it is currently the largest Native American religious denomination, as well as the only group to have the undisputed right to consume psychedelics in the United States. A fuller comparison of the political organizational tools of the Wixárika and the NAC and how the peyote experience has contributed to each would be most welcome, as would a comparison of the respective rates of alcoholism between the two groups (alongside a non-peyote-using indigenous group). It would be interesting to see to what extent the NAC focus on sobriety brings about abstinence, in comparison to the natural mediation of substance abuse psychedelic use can bring about, which I alluded to earlier; peyote is often ritually consumed in tandem with alcohol by the Wixárika.

In addition to the possibilities for further research I've mentioned, this thesis leaves several theoretical questions open. First, is there a specific "sweet spot" on the structure/anti-structure continuum that leads to ideal mental and social health? Or is a regular "back and forth" of experiences along the continuum necessary? It certainly would be disadvantageous to exist perpetually in the anti-structural, entropic, psychedelic state of mind, which would be akin to psychosis. Perhaps there is an ideal "resting state" of neural entropy; but if that is the case, how frequent an induction of an anti-structural mindset is necessary to maintain it? Also, could a kind of social map of neural entropy be drawn, with various roles in society projected onto it? For example, artists and musicians likely inhabit the opposite end of the entropic spectrum as soldiers. But perhaps this is illustrative of the hazards of either outer edge; the well-known abundance of mental



illness among veterans may be due to the highly structured conditioning of rigorous training which creates a neural rigidity that outlasts active duty, and the cliché about the “unstable artist” seems to have at least a veneer of truth, though the reason for the correlation remains unclear (Taylor). Lastly, is there an equivalent drug--- or therapy--- that provides the opposite action to psychedelics--- i.e. a safe means for heightening structure when a person or society is tending toward excess entropy? In a fairly rigid western society, it doesn't seem necessary, but perhaps it is worth considering if we are to encourage the regular experience of entropy-inducing *communitas*, knowing that there is the possibility of the pendulum swinging too far in the opposite direction.

In closing, I am left to suggest that whatever the means--- whether religious, spiritual, secular, or psychedelic, it would be beneficial for new rituals to be developed that fit snugly into western society that regularly provide a dose of anti-structure. I suspect that a drive towards *communitas* experience is innate, beyond the widespread desire for chemical intoxication. This would help explain why, in an era of increasing secularism, denominations that put an emphasis on the primary religious experience, such as Evangelical branches of Christianity, continue to grow. If there is indeed an evolutionary benefit to these types of experiences, it would also help to explain the widespread popularity of a host of “sub-mystical” activities such as yoga: an avenue to *communitas* that snuck into western society under the guise of an exercise class.

Perhaps we can look to the Wixárika for inspiration on how mystical experiences can be integrated into life in a complete, holistic way. Admittedly, there is a limit to this, as the deer-maize-peyote complex developed over hundreds, if not thousands of years,

and is perfectly suited to the Wixárika worldview and natural environment. I don't think there is necessarily a perfect balance of structure and anti-structure that can be prescribed, but it seems that this is part of the particular strength of supported psychedelic use; that it has the power to so strongly encourage an existential *communitas* experience, and is in that sense self-regulating. It is difficult for a society that has lost its connection to anti-structure to find the middle ground again; it can be so starved for *communitas* that it has the capability to swing violently to the other side of the spectrum, such as we've seen with hippies. It remains to be seen if any lasting model can be created in the west, then, that can induce regular, meaningful *communitas* experiences in a culturally appropriate manner, and thus address the root cause of many of the woes of the modern condition. I will leave the final thought to Victor Turner, who writes that we need to find a balance between the two poles of existence---

Otherwise we must all perish, for behind specific historical and cultural developments, East versus West, hierarchical versus egalitarian systems, individualism versus communism, lies the simple fact that man is both a structural and anti-structural entity, who *grows* through anti-structure and *conserves* through structure (Dramas, Fields, and Metaphors 298).

May we (re-)discover the proper blend of growth and conservation on a species-wide scale!

## Notes

1. It is unclear where the term “Huichol” came from, though up until fairly recently it was nearly universally used by outsiders. Conventions are beginning to change, however, and in this paper I use the preferred terminology of “Wixárika”, though I leave quotations containing the former intact.
2. I use the term *psychedelic*, or “soul-manifesting”, as opposed to either *hallucinogenic* or *entheogenic*; the former is inaccurate and outdated, and the latter was coined primarily to avoid the taboo connotations of the more popular “psychedelic”, which are quickly fading.

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