

Shamanism: The Biological Bases of an Evolved Healing Capacity

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Overview of Lecture

What is Shamanism?

Cross-cultural Perspective

Origins of Shamanic healing--Hominid ritual

Are Shamans Mentally Ill?

Psychosis and Endogenous Healing Responses

Pivotal Mental States

Biogenetic Origins of Shamanic Healing

Sickness & Healing Response

Rituals as Technologies--Mimesis

Shamanic ASC & Healing Principles

Bases of Shamanistic Therapies: Ritual, ASC, Spirits

Sociophysiological Dynamics of Ritual

ASC as therapeutic mechanisms

WHAT IS SHAMANISM?

“Enters ecstasy to communicate with spirits on behalf of community” (Eliade)



The problematic

- Are same characteristics found cross-culturally?
 - Or just in some Siberian societies?
- Is shamanism just a Western invention OR Is shamanism transcendent reality?
 - is it “real,” (etic) found in different cultures
 - i.e., foraging lifestyle, family forms & kinship systems
- How to scientifically resolve the question?
- **Cross-cultural research**

Available at www.Researchgate.net

SHAMANS, PRIESTS AND WITCHES:
A CROSS-CULTURAL STUDY OF MAGICO-
RELIGIOUS PRACTITIONERS

BY

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Types of Magico-religious Practitioners Derived from Cluster Analysis

Shamanistic Healers

Healer Complex

Shaman

Shaman/Healer

Healer

Medium

Priests

Sorcerer/Witch

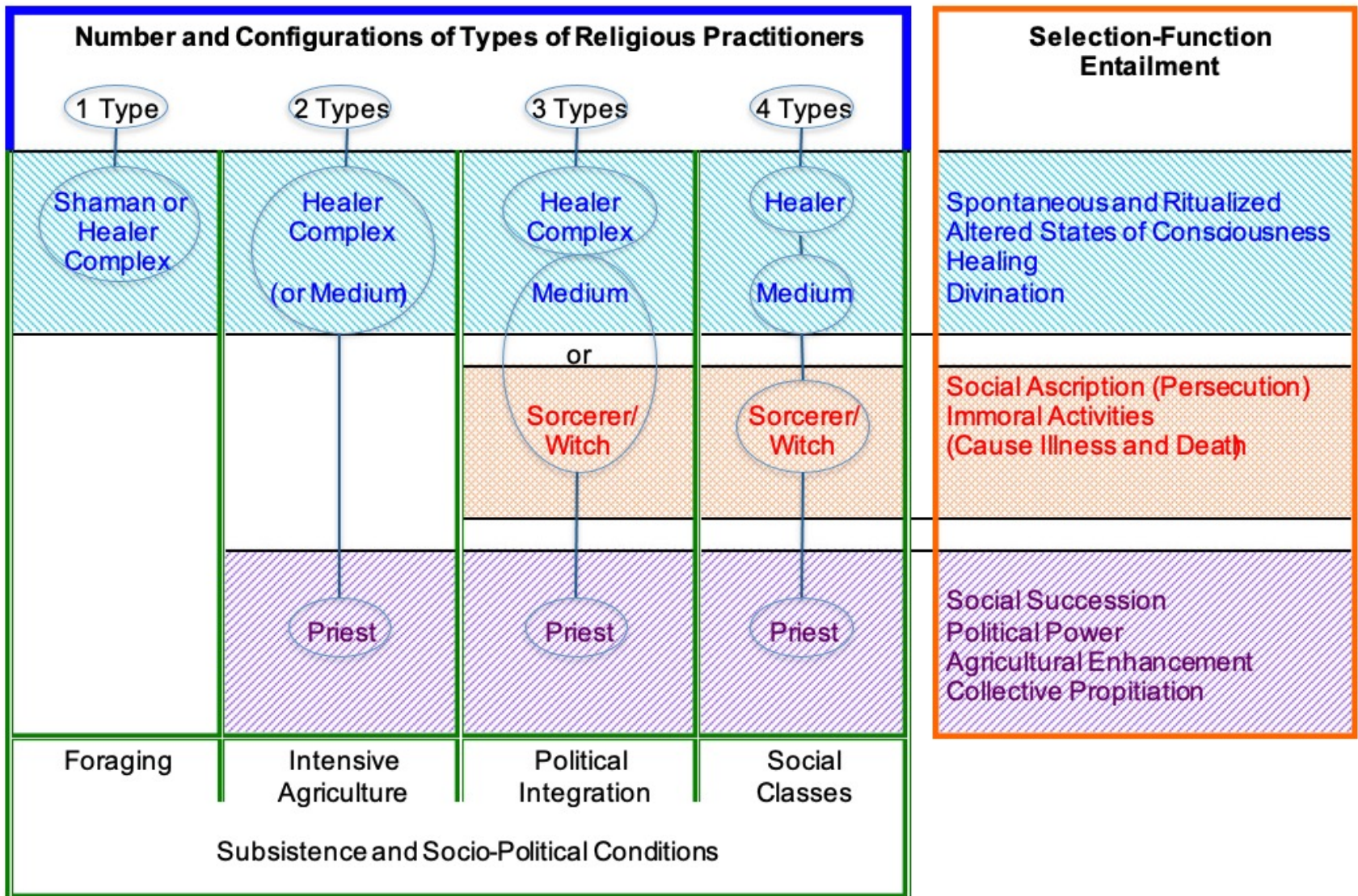


Fig. 1 Configurations of religious practitioner types, selection-function relationships, and social complexity



An Ethnological Analogy and Biogenetic Model for Interpretation of Religion and Ritual in the Past

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Abstract

This paper provides a method- and theory-focused assessment of religious behavior based on cross-cultural research that provides an empirically derived model as a basis for making inferences about ritual practices in the past through an ethnological analogy. A review of previous research provides an etic typology of religious practitioners and identifies their characteristics, selection-function features, the societal configurations of practitioners, and the social complexity features of the societies where they are found. New analyses reported here identify social predictors of the individual practitioner types in their relationships to subsistence and sociopolitical conditions (foraging, intensive agriculture, political integration, warfare, and community integration). These relations reveal the factors contributing to social evolution through roles of religious

Social Universals of *Shamans*

Hunter/gatherer and foraging societies

Night-time/Overnight Group Displays

Chanting, Drumming and Dancing

ASC as Visionary Experiences

Soul Flight

Transformation Into/Animal Identity

Death and Rebirth Experience

Control Animals/Animal Spirits

Healing Soul Loss, Sorcery and Spirit Attacks

Divination

Hunting Magic

Malevolent Acts – “sorcery”

Shamanic Healing Principles

- Shamanic formation as healing
- Shamanic selection
 - spirit affliction -> wounded healer
- Healed with vision quest for spirit allies
 - Fasting, sexual abstinence and austerities
 - Initiatory death leads to rebirth experience
 - Empowerment through incorporation of animal powers
- ASC as healing--astral projection, out-of-body, near-death

Shamanic Healing processes

- Communal Processes (overnight)
 - Soul recovery through soul journey
 - Object extraction through sucking, sleight-of-hand
 - Spirit encounters in visions, illness, and dreams
 - Combat with sorcerers– soul journey + return darts
- Healing through dramatic enactment
 - drumming, dancing, chanting, singing & imitation

- SHAMANISTIC HEALERS—
 - SHAMANS, SHAMAN/HEALER, HEALER & MEDIUM
- Ritually alter consciousness to enter spirit world for divination and healing
- CULTURAL UNIVERSAL
- SELECTION--> FUNCTIONS
- Visions/Dreams -->
- Spirit Visitations--> Ritual Alteration--> Healing
- Vision Quest--> Of Consciousness--> Divination

Medium Differences vs. Shaman

- Complex Societies w/ Warfare & Captives
- Onset later in life, early adulthood
- Predominantly women, lower class
- Initial ASC Possession by spirits involuntary
 - Relationship with superior spirits, gods, males
 - ASC with tremors, convulsions, seizures, compulsive behavior, amnesia, dissociation
- Healing by exorcism and sacrifices
- Protection from spirits and malevolent magic

Healer Differences vs. Shamans

- Agricultural rituals and animal sacrifice
- Formal professional groups & specialization
 - Pay for training and membership
 - Political and economic power
- Limited ASC
 - Lack of direct communication with spirits
 - Relations with “high gods” not animal spirits
 - Use material systems for divination
- Heal thru spells, formulas and exorcism
 - Protection from spirits and sorcerers
- Private client rituals, not collective



A cross-cultural study of the elementary forms of religious life: shamanistic healers, priests, and witches

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ABSTRACT

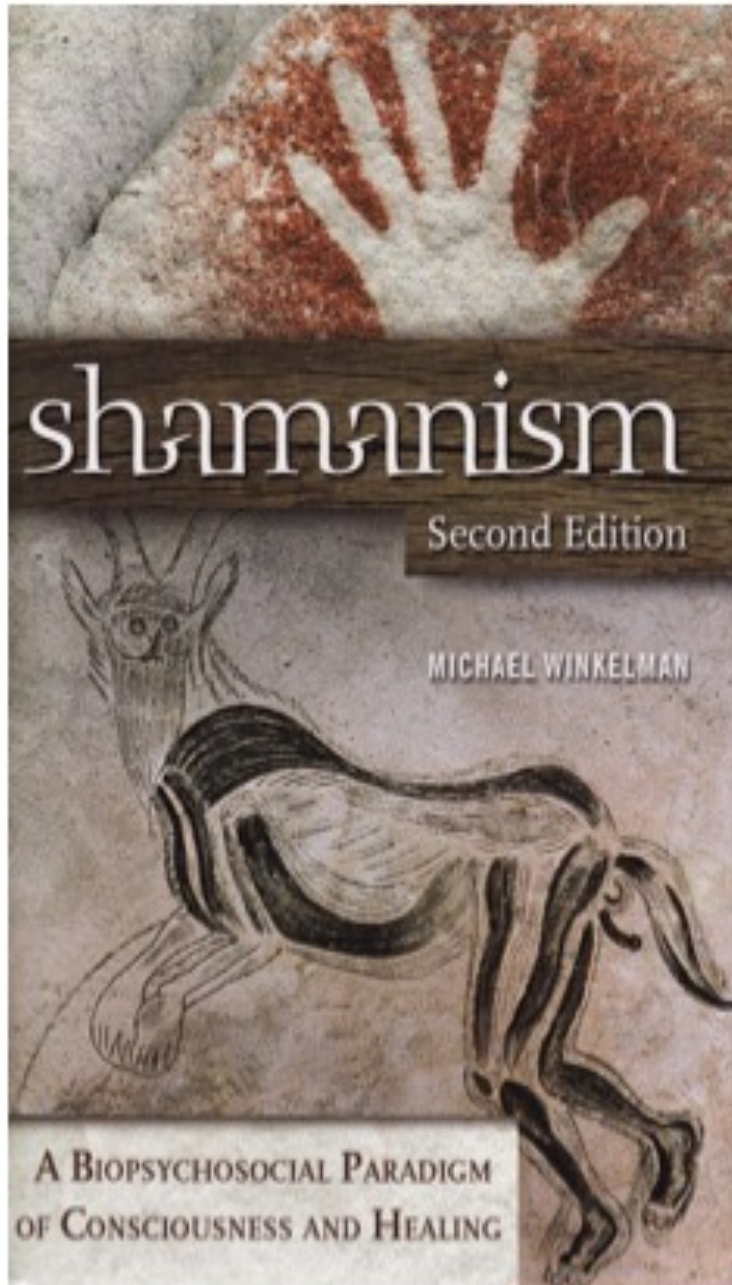
Empirical cross-cultural research provides a typology of magico-religious practitioners and identifies their relations to social complexity, their selection-function relationships, and reveals their biosocial bases. Different practitioner types and configurations are associated with specific ecological and political dynamics that indicate a cultural evolutionary development. Relations between practitioners' selection processes and professional activities reveal three fundamental structures of religions: (1) selection and training involving alterations of consciousness used for healing, manifested in Shamans and other shamanistic healers; (2) social inheritance of leadership roles providing a hierarchical political organization of agricultural societies, manifested in Priests; and (3) attribution of a role involving inherently evil activities, and manifested in the Sorcerer/Witch. Shamans were transformed with foraging loss agricultural intensification warfare and political

KEYWORDS

Comparative religion;
religion; shamanism;
priesthoods; cross-cultural
studies; cultural evolution;
Anthropology of shamanism;
evolution of religion

Origins of Shamanic healing

- Ape-Hominid Communal Ritual Integration
 - Nighttime community integration, protection
 - Conspicuous display with excessive fitness
- ASC as Innate Processes
 - Integration of Innate Intelligences
- Divination as Integration of Cognitive Modules
 - Spirits, Mimetic Suite, Animals, Divination as innate cognitive functions
- Endogenous Healing Processes
 - Opioids & Social Bonding, Placebo and Hypnotic



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Are Shamans Mentally Ill?

19th century scholars assert shamans' ASC resemble mental illness-- hysteria, schizophrenia or psychoses

Countered by Shirokogoroff's research on the Tungus shaman-- *Psychomental Complex of the Tungus*

“Arctic hysteria”

But behaviors were normative (if not normal) in the context of Tungus culture.

Not dysfunctional but powerful healers who provided crucial services to their communities.

Cosmological, ecological, social and therapeutic roles.

ASC, Shamanism and Psychosis

- Current general impression that association of shamans and pathology has been thoroughly debunked (Walsh, Noll)
- *BUT--* Some clinical cases of mania and psychosis manifest features of insensitivity to pain, psychomotor agitation, aggression, and super-strength also alleged for shamanism
-
- Some would-be shamans manifest pathology symptoms
 - experience confusion, lose their appetite and stop eating, become passive and withdrawn, run away and seek solitude in the wilderness, hide from others, speak in confusing and incoherent ways, and expose themselves to fire, self-inflicted wounds and pains

Excessive emotionality and lability

- Whitley (2008) to suggest shamans show bipolarity.
 - bipolar disorder reflected in the historical associations of shamanism with arctic hysteria and reactive and acute psychoses
- Even Walsh suggests initiatory period characterized by acute psychotic episode that resolves during training
 - Differences between initiate's crises and formation and the features of established shamans
- Similarities in psychosis and shamanic conditions
- Both also elicit endogenous healing responses

Psychosis & Self Healing Responses

- Psychosis as results of inability to resolve what is interpreted as an inescapable crisis
 - A similar crisis frequent in call for a shamanic vocation
 - Initiate accepts call to become a shaman or persecution by spirits, illness or possible death
- Temporary relief states can follow premorbid and prodromal sickness--spontaneous healing, remission
- Brouwer and Carhart-Harris-‘pivotal mental state’
 - Transformative self-healing processes such as associated with psychedelics, shamanic healing and spontaneous remission of acute psychoses.

Pivotal mental states (PiMS)

- Evolved function for producing psychological transformation when demands exceed self resources.
- PiMS a hyper-plastic state that mediates psychological transformation through rapid and deep learning in crisis
- Relaxation of prior assumptions, enabling a greater sensitivity to new information.
- Brouwer and Carhart-Harris's (2021) propose principal primers for pivotal mental states involve chronic stress compounded with acute stress events that trigger serotonergic responses.
- 5-HT release activates the PiMS system, a multi-level pathway

PiMS Activation

- Stress activates serotonin 2A receptor systems and increase availability of serotonin or receptor binding through
 - Activators include social isolation, fasting, sleep deprivation & acute pain (Brouwer & Carhart-Harris 2021)
- Shamanic practices discovered deliberate induction of PiMS
 - Techniques include prolonged isolation in the wilderness, fear, fasting, painful austerities, extensive exercise (dance and drumming), sleeplessness
- Also natural consequences of prolonged periods of being lost, starving and physically traumatized, conditions that naturally induce PiMS.

Death and Rebirth (DRE)

- DRE appear universally associated with shamanism+
 - Primordial fear of humans in wilderness- being attacked, killed and eaten by predators.
- Vision of feared reality provides transformation
- stress response that produces fragmentation of the ego
- Autosymbolic images of transformation
- Laughlin, McManus, d'Aquili (1992)–psychological reorganization guided by archetypal drive toward wholeness (holotropism) and transcendence to a new identity.

Transformation thru Power Animals

- Empowerment through animals as natural symbols for identity and individuation
- Shamans' incorporation of animal powers into identities provide qualities for self identity.
 - Models for attitudes and behavior
- Incorporate animal species qualities into personality.
 - Hierarchy of control for internally differentiated social structure-selves

Animal identity an innate intelligence

- natural history intelligence, an intrinsic ability to recognize “species essence” and qualities
- innate analogical system for creation of meaning in personal and social domains – i.e., totemism
- animal species as self through introjection of animal features.
- Co-opts normal process of socialization
 - Based on social intelligence to unconsciously incorporate significant social other’s identities, qualities, perceptions, expectations and behaviors into the self

The Spirit World as Natural Psychology

- Spirits as Neurognostic Structures = “Archetypes”
 - “Spirits as Fundamental Structures of Consciousness”
- Biopsychosocial Structures of Human Nature
 - Complexes of the Unconscious
 - Spirits as Innate Social Intelligence
- ”DMT Entities” as the integration of innate modular intelligences

Why Shamanic Healing is Cross-cultural

- Features of our innate psychology
- Endogenous healing processes
 - Ritual as social modulation
 - Endogenous opioids & Mimetic Suite
 - Psychobiology of ASC
 - Innate intelligences

BIOGENETIC ORIGINS OF SHAMANIC HEALING

- Hominid (pre-human) collective ritualization indicated in similarities with ape displays—
 - Community night-time re-unification rituals
 - Group Chanting, Drumming and Dancing
 - Providing group protection and integration
 - Psychosocial integration and therapeutic effects
- Community ritual manages emotional processes
 - Security-> stress management, relaxation
 - Social Attachment Processes

Sickness and healing response (SAHR)

- Human adaptations to sickness involve endogenous healing responses (Fabrega 1997)
 - Integrated social and biological adaptation involved in altruistic helping of others
 - Caring and compassion expanded across hominid evolution
- Biologically rooted sociality elicited when impairments to health disrupt the effective functioning of the group
 - Shamanic ritual does both—heal and extend social harmony

Community Rituals as Technologies

- Group Chanting, Drumming and Dancing as Social Bonding Technologies
 - Expansion of endogenous opioid responses
 - Rituals as social, physiological and emotional coordination processes
 - Enhancement of neurotransmitter system responses

Placebo Effects of Ritual Healing

- Hypnotic Response
 - Dominance-submission dynamic and placebo responses
- Placebo
 - Susceptibility to enter into cognized social reality
- Adaptations of capacity for dissociation from trauma in close personal relations
 - Social other determines “social reality”
 - Capacity to engage physiological responses with imagined realities--Psychoneuroimmunological effects

Mimesis and Well-Being

- Social coordination as basis of society
- Endogenous opioid responses
 - Mother-infant bonding
 - Grooming
 - Mimetic Suite as evolved capacities
- Mimetic Capacities
 - Drumming, Dancing, Singing, Drama, Enactment, Non-verbal communication

Drumming

- Drumming as mammalian adaptation
 - Use feet, hands, sticks in conspicuous display
- Collective choruses of pant-hoots.
 - Resemble the patterns of their alpha male
 - Communicate identity & contextual info
- Short bursts (12 seconds) in chimps
 - Area of proximal evolutionary development for shamanism

Music as Endogenous Healing Modality

- Music as modular intelligence --aspect of mimesis
- Music evokes biologically determined emotional states
- Music elicits endogenous opioid system.
- Music engages biological functions that induce relaxation
 - Reduce stress and enhance emotional harmony
 - Transforms emotions and releases repressed emotions
- Music highly effective mechanisms for coordination of emotions and interpersonal relations
 - Enhances emotional modulation, bonding and synchrony

Dance as Therapy

- Dance is core to shamanism
 - Used therapeutically in cultures around the world
 - Elicits many neurotransmitter and hormone responses
- Elicits intrinsic therapeutic effects in emotional reactions and catharsis.
 - Liberates repressed emotions and unconscious dynamics in nonverbal expressions
- Engages release of ego control to body intelligences
- Allows for emergence of ancient body-based expressive modalities that promote psychological integration and self-actualization.

Reprogramming the Habitus

- Habitus-- the ingrained behavioral habits, emotional dispositions
 - Expressing habitus produces embodiment and externalization of feelings
- Dancing exceptional modality for expressing and reprogramming this mimetic-inscribed habitus.
 - Through psychotechnologies of neurotransmitters
 - motor and somatosensory engagement
 - affective linkages with group—psychosocial dimensions
-

Shamanic ASC Features

Ritual Technologies of Consciousness

Collective Rituals

Drumming, dancing, chanting, singing

Fasting, austerities, sleep deprivation, heat&cold

Sacred medicines

Induce “Ecstasy”-Alterations of Consciousness

Visionary Experiences and Soul Flight

Death and Rebirth Experience

Spirit Relations with Animals

Animal Transformation and Identity

Evolved Biological Bases of ASC

- Exaptation of dream capacity– lucid dreaming
- Trauma: Ritual and natural occurrences
- Responses to near-death experiences
- Extreme running and the runner's high
- Effects of natural substances such as the psychedelic *Psilocybe* mushrooms.

Biological Dynamics of ASC

Common Brain Response to diverse procedures

- Synchronized Theta waves (3-6 cycles per second)
- Originate in the serotonergic circuitry linking Brain Stem-Limbic-Frontal
- Activation of temporal lobes and emotions
- Synchronize frontal cortex with slow wave patterns
 - Interhemispheric Synchronization
 - Synthesis of Behavior, Emotion & Thought
- Reflect natural MODE of Consciousness

General ASC Therapeutic Effects

The Relaxation Response and Stress

Accessing the Unconscious

Extinction of Learned Patterns

Visualization/Mental Imagery

Psychosocial Opioid Release

Serotonergic Neuromodulation

Psychoneuroimmunological Effects

Shamanic “Dream-Time

- Dreams are central to shamanic ASC
 - Normal physiological processes of dreaming are engaged by the overnight shamanic rituals.
 - Incorporation of dream processes through dream incubation
-
- Shamanism exapted an innate mammalian adaptation
 - Capacity for learning and information consolidation by producing memory associations during sleep

Dreams and Active Imagination

- Dream incubation as a set preparation
 - Enhancing integration of normally unconscious processes
- Dreams as natural extrapharmacological influence for shamanic and psychedelic experiences
 - Integrating information from the unconscious, especially in visual forms.
- Enhanced learning and memory integration makes these features important

Why Dream Work Heals

- Enhanced capacity to integrate unconscious material into waking consciousness.
- Provides new possibilities in virtual scenario construction of dream functions.
- Integration facilitates the resolution of trauma and conflicts
- Phantasy imagery (from dreams, psychedelics) reflects “active imagination” –change agent
- Focus on dream material narrative provides process for integrating unconscious material
- Key tools -- focuses on images that emerge from the unconscious mind, collective unconscious

ASC and the Dopaminergic Personality

- DREAMING IS DOPAMINERGIC!
- Reduction of noradrenergic modulation control and ascendance of dopaminergic and acetylcholine systems produces dreams (Hobson).
- Dopamine activated by ritual (Previc, 2006),
 - extensive exercise such as dance
 - parasympathetic (relaxation) effects
 - Shamanic activities also stimulate serotonergic systems and the endocannabinoid system

Elevated dopamine produces:

- Positive emotions, euphoria and belongingness;
 - Bonding and affiliation;
 - Enhanced coping, stress tolerance, and ability to adapt.
 - Inhibits negative emotional arousal of fear and anxiety
 - Enhances more effective functioning in extreme environments
-
- All enhance response to stress and mental illness

Dopamine and Cognition

- Dopamine effects advanced cognitive processes (Previc)
 - working memory and stimulus associations,
 - exploratory behavior, motivation, goal-directedness,
 - reward prediction, cognitive shifting,
 - motor programming,
 - abstract representation, temporal processing,
 - generativity and creativity
- All of these process can contribute to the active resolution of crises producing psychotic breaks

Shamans' highly dopaminergic minds (Previc 2009)

- charismatic, intelligent and confident,
- seeking connections to unseen forces,
- aggressive drives to achieve distant goals,
- magical ideation, and delusions of grandiosity, invincibility
- belief in ability to control others and distant events
- Stimulation of lateral dopaminergic levels enhance executive and internal locus of control
- Excessive levels leads to delusions of grandiosity and invincibility and magical ideation about abilities to control distant events and others.
- Either attitude would be a powerful counter to the crises of indecision facing the psychotic.

Adaptive Aspects of ASC

- Enhanced access to normally unconscious information
 - Integration of different brain systems and functions
 - Enhances learning and unlearning of information
 - Behavioral, emotional, and cognitive integration
 - Information integration exemplified in visions
 - Symbolic image system underlying the dream mode of consciousness
 - Encounters with our own unconscious potentials

Contemporary Implications of Shamanism

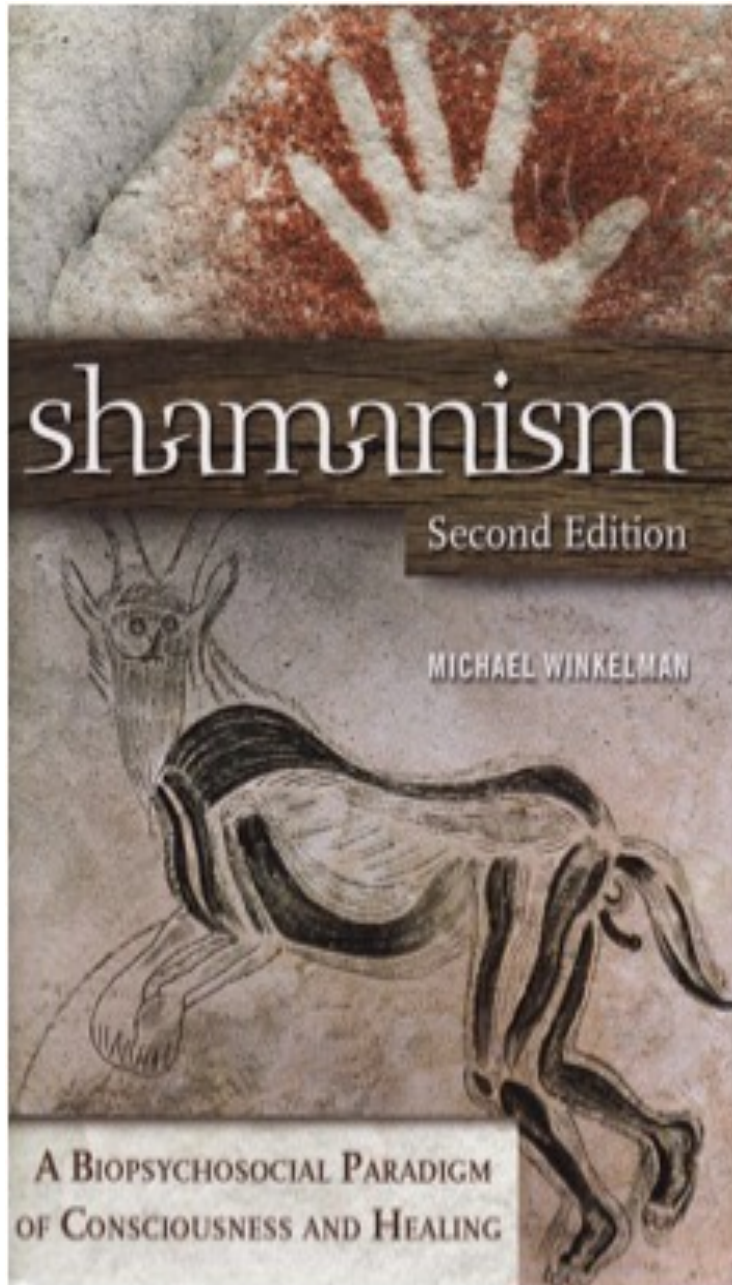
Part of our evolved psychology

Alterations of consciousness as natural process

- Production of adaptive cognitive states
- Visions as symbols of psychological processes and information integration
- Ritual activity as technology for altering consciousness
 - Ritual transforms and integrates consciousness
- Physiological effects of ritual are therapeutic
 - Enhanced psychointegration

Using ritual to transform and integrate consciousness

- Shamanic Journey--Unconscious and Self
 - Develop awareness of unconscious intelligences through shamanic journeying
 - Acquire assistance in self-maintenance through animal powers and “healing energies”
 - Engage innate cognitive processes through mimetic suite- song and dance



Articles
available at
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