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CAPA

Depiction of a Siberian shaman by Nicolaes Witsen from the 17th century. “Een Schaman ofte Duyrel-Priester in’t Tungeesen lant” - “A Shaman or Animal Priest in the Tungus land” (Rufus Malim’s translation).

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EDITORIAL

Neste volume 17 da revista **Antrope** apresentamos dois importantes trabalhos. No artigo “Desafios e Diretrizes na Utilização Responsável de Dados LiDAR na Arqueologia Subaquática: Chamada à Ação” Alexandra Figueiredo e Manuel Menino focam-se na crescente importância da tecnologia LiDAR na arqueologia subaquática e na necessidade urgente de diretrizes para o seu uso responsável e ético.

O artigo demonstra como a tecnologia LiDAR (Light Detection and Ranging) se tem revelado uma ferramenta valiosa na investigação arqueológica, permitindo a visualização detalhada do ambiente subaquático e a descoberta de sítios históricos submersos que anteriormente eram de difícil acesso. O LiDAR oferece a capacidade de mapeamento preciso e detalhado do fundo do mar, transformando o potencial da arqueologia subaquática.

No entanto, o artigo destaca que esta tecnologia levanta questões cruciais relacionadas com a responsabilidade, o acesso e o uso da informação adquirida. Aborda a diversidade de políticas de acesso a dados, as estratégias de acesso, os desafios específicos colocados pela utilização de dados LiDAR, os regulamentos de proteção de dados e o dilema entre a divulgação e a proteção de sítios arqueológicos. Neste artigos, os autores enaltecem a importância da colaboração, da transparência e de práticas responsáveis na investigação e preservação do Património Subaquático, sensibilizando para o uso adequado dos dados LiDAR. O artigo argumenta que as diretrizes tradicionalmente utilizadas na arqueologia muitas vezes não contemplam os desafios específicos colocados pelo uso dos dados LiDAR, nomeadamente no que respeita à escala e amplitude dos dados recolhidos, que extrapolam a tradicional escala do local de escavação. Assim, a revisão e atualização destas diretrizes são essenciais para incorporar as especificidades e desafios que a utilização desta tecnologia traz para a prática arqueológica contemporânea.

Já no segundo trabalho, Rufus Malim apresenta uma proposta para uma definição universal definitiva para os termos “Xamã” e “Xamanismo”.

O texto aborda a utilização problemática dos termos “xamã” e “xamanismo” em contextos académicos e populares, devido à generalização excessiva e à especificidade cultural. Defende uma clarificação destes termos, reconhecendo a sua utilização histórica e a necessidade de uma definição mais precisa. O autor utiliza uma metodologia dialética, examinando as definições existentes e as críticas de estudiosos como Eliade, Diószegi, Harner, Hultkrantz, Porterfield, Winkelman, Lewis-Williams & Dowson, Bahn e Hamayon. Esta abordagem envolve a apresentação de teses (definições passadas), antíteses (críticas) e a sua síntese para criar uma definição mais exacta. A questão central do autor passou por tentar equilibrar os significados culturalmente específicos com as semelhanças globais observadas nas práticas xamânicas. O autor critica as definições livres de cultura por negligenciarem a variabilidade cultural e as definições culturalmente específicas por terem dificuldade em aplicar-se universalmente. O texto explora perspectivas que incluem as experiências “extáticas” dos xamãs (Eliade), a dinâmica psicossocial (Porterfield) e os fundamentos neurobiológicos (Winkelman, Lewis-Williams & Dowson), reconhecendo também as limitações de cada uma delas. O objetivo final deste trabalho é chegar a uma definição que reflecta os estudos actuais e distinga o xamanismo de outros fenómenos mágico-religiosos e psicobiológicos.

Agradecemos a todos os revisores pela revisão cuidadosa dos artigos e pelas valiosas sugestões que contribuíram significativamente para melhorar a qualidade destes trabalhos.

A editora,
Sara Garcês

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Desafios e Diretrizes na Utilização Responsável de Dados LiDAR na Arqueologia Subaquática: Chamada à Ação

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RESUMO

Palavras-chave:

LiDAR;

Arqueologia subaquática;

Utilização responsável dos dados LiDAR.

A utilização da tecnologia LiDAR (Light Detection and Ranging) na Arqueologia Subaquática tem um grande potencial para a descoberta, estudo e salvaguarda de sítios históricos submersos. No entanto, este avanço tecnológico levanta também considerações sobre a utilização responsável desta informação, uma vez que este património não é normalmente visível à superfície e pode estar sujeito a actos de vandalismo e pilhagem, que podem pôr em causa a sua preservação e salvaguarda. É essencial encontrar um equilíbrio entre a partilha de conhecimentos e a garantia de que estes sítios são protegidos de potenciais ameaças. Este artigo realça a importância da colaboração, transparência e práticas responsáveis na investigação e preservação do Património Subaquático, sensibilizando para a utilização de dados LiDAR. Este artigo aborda os seguintes tópicos: Diversidade de políticas de acesso a dados; Estratégias de acesso; Desafios colocados pela utilização de dados LiDAR; Regulamentos de proteção de dados; Dilema da divulgação vs. proteção de sítios arqueológicos. O artigo termina com uma breve abordagem às implicações das diretrizes na utilização responsável destes dados, procurando contribuir para o desenvolvimento de práticas conscientes e sustentáveis na gestão e divulgação destes valiosos recursos.

ABSTRACT

Key-words:

LiDAR;

Underwater archaeology;

Responsible use of LiDAR data.

The use of LiDAR (Light Detection and Ranging) technology in underwater archaeology has great potential for the discovery, study and protection of submerged historical sites. However, this technological advance also raises considerations about the responsible use of this information, as this heritage is usually not visible on the surface and may be subject to acts of vandalism and looting that could jeopardise its conservation and protection. It is essential to strike a balance between sharing knowledge and protecting these sites from potential threats. This paper highlights the importance of collaboration, transparency and responsible practices in the research and conservation of underwater heritage, and can be used to raise awareness of the use of LiDAR data. This article addresses the following issues: Diversity of data access policies; Access strategies; Challenges posed by the use of LiDAR data; Data protection regulations; Disclosure vs. non-disclosure dilemma; Protection of archaeological sites. The article concludes with a brief outline of the implications associated with guidelines for the responsible use of these data, with the aim of contributing to the development of conscious and sustainable practices in the management and dissemination of these valuable resources.

1. INTRODUÇÃO

Nos últimos anos, observou-se um notável aumento do uso da tecnologia LiDAR em projetos arqueológicos (Fernández-Lozano et al. 2015; Sibanda et al. 2021; Monterroso-Checa et al. 2021). Esta tem demonstrado um grande potencial de desenvolvimento e de

aplicabilidade, tanto na investigação como na capacidade de documentar novas descobertas e na visualização de estruturas soterradas. O objetivo deste estudo é avaliar a aplicação da tecnologia LiDAR na Arqueologia Subaquática, focando-se na utilização responsável dos dados produzidos.

2. A TECNOLOGIA LIDAR

A tecnologia LiDAR tem-se mostrado uma ferramenta valiosa na pesquisa arqueológica, permitindo a visualização detalhada do ambiente subaquático e revelando sítios históricos submersos que anteriormente eram difíceis de detetar.

Esta tecnologia assenta numa ferramenta de deteção remota, que usa um laser para medir distâncias e criar mapas precisos do terreno num ambiente tridimensional. Os pulsos de laser medem com precisão a distância, e as informações de localização são correlacionadas com dados de navegação, resultando em nuvens de pontos (Opitz & Cowley, 2013). Segundo Opitz (2013, p.20), a “posição geodésica de cada retorno do laser está correlacionada com as informações de navegação que são armazenadas como nuvens de pontos”. O processamento subsequente destes dados espaciais pode criar modelos precisos da superfície do solo, incluindo dados de elevação, a partir dos quais pode ser realizada uma infinidade de análises.

Embora desenvolvida na década de 1970, foi no século XXI que a tecnologia LiDAR se tornou viável para aplicações comerciais e de investigação. Desde então, revelou-se fundamental na cartografia e na prospeção arqueológica, inclusive subaquática (Opitz, 2013, p.15). Através do processamento de pontos e utilizando diversas técnicas de interpolação para gerar produtos como Modelos Digitais de Elevação (MDE) ou Modelos Digitais de Superfície (MDS), que são depois armazenados em formato raster, o relevo do solo ganha forma, podendo ser analisado por um software. Através da manipulação de parâmetros como a gestão de cores, o estiramento do histograma ou o sombreamento (hillshade) podem ser geradas outras imagens, que permitem interpretar elementos representados na superfície, úteis para identificar potenciais sítios arqueológicos.

A fase seguinte envolve a deteção e interpretação das características identificadas. A colaboração entre especialistas em LiDAR e arqueólogos tende a melhorar os resultados, mas a confirmação no terreno é essencial, pois os dados LiDAR mostram apenas características anómalas que podem ser interpretadas como estruturas arqueológicas potenciais (Opitz, 2013; Opitz & Cowley, 2013).

Para a arqueologia subaquática, o uso do LiDAR representa um avanço significativo na investigação

de sítios submersos, permitindo mapeamento preciso e uma visão mais detalhada do fundo do mar (Štular et al., 2012). Ainda que limitada pela profundidade e capacidade de penetração do laser, ela garante, junto à costa, o registo de uma representação muito fiel do solo aquático. Sobre este mesmo assunto, Fiorucci e sua equipa (Fiorucci et al. 2022) referem que a análise de dados LiDAR pode revelar características topográficas e geomorfológicas relevantes para a identificação de anomalias, que não são visíveis através de outros meios.

Adicionalmente, os mapas LiDAR proporcionam uma visão geral dos locais a investigar, permitindo aos arqueólogos direcionar os seus esforços para áreas específicas com maior probabilidade de conter vestígios ou estruturas importantes. Isso economiza tempo e recursos, tornando as investigações mais sustentáveis e eficientes (Opitz & Cowley, 2013; van der Schriek & Beex, 2017; Kokalj & Hesse, 2017). No entanto, é importante destacar que o LiDAR não substitui completamente as técnicas tradicionais de prospeção arqueológica. Embora forneça uma valiosa perspetiva geral dos locais submersos, o trabalho de campo ainda é necessário, para validar e interpretar os dados recolhidos. Isso pode envolver prospeções diretas com mergulhadores nas áreas específicas mapeadas para confirmar a presença ou não de vestígios arqueológicos.

3. USO RESPONSÁVEL DOS DADOS LIDAR

Observando toda a potencialidade de uso do LiDAR, já amplamente debatida em inúmeras publicações (Almeida, 2019), surge uma questão relacionada com a responsabilidade, o acesso e o uso da informação adquirida. A novidade da tecnologia LiDAR e a sua rápida adoção por várias disciplinas científicas têm levado a uma diversidade de abordagens e políticas de acesso. Questões relacionadas com a disponibilidade da informação, autoria e direitos ou critérios de seleção conferem ao sistema uma certa nebulosidade. Esta diversidade reflete as peculiaridades intrínsecas de cada projeto, tais como as características do sítio arqueológico e os elementos específicos que estão a ser estudados, bem como as políticas de partilha de dados estabelecidas por cada instituição. Observa-se também uma tendência para promover o acesso aberto a dados geoespaciais (McCoy,

2017), impulsionada pela necessidade de facilitar o intercâmbio científico, promover a colaboração interdisciplinar e garantir maior transparência e democratização no acesso a informações que são cruciais para uma multiplicidade de ciências, incluindo para a compreensão e reconhecimento do património arqueológico (Sánchez, 2018). Contudo, torna-se importante conceber estratégias de acesso aos dados, desde as fases iniciais de qualquer projeto arqueológico. Esta antecipação estratégica não apenas simplifica a partilha de dados com outros especialistas da área, como promove uma gestão mais eficiente e organizada dos dados recolhidos, potenciando, assim, os resultados a alcançar.

Cumprir notar que as diretrizes tradicionalmente adotadas na arqueologia, muitas vezes não contemplam os desafios específicos colocados, pelo uso dos dados LiDAR. Segundo Richardson (2018), quando consideramos o uso de dados “é necessário reconhecer que o aumento do uso destas tecnologias, ainda não resultou numa preocupação correspondente com os padrões éticos e comportamentais no campo da arqueologia” (p.64), mas que com o aumento significativo da sua aplicação convém começar a equacionar as possíveis soluções e melhores estratégias. É, por isso, importante também reconhecer que a implementação de políticas de acesso aberto pode encontrar desafios, como questões de propriedade intelectual, privacidade e ética na divulgação de informações sensíveis. Portanto, as políticas de partilha de dados devem ser cuidadosamente elaboradas para equilibrar a necessidade de transparência e acesso com a proteção dos interesses legítimos dos pesquisadores, salvaguarda do património e das comunidades envolvidas.

Notámos ainda que as diretrizes usadas em arqueologia são alicerçadas em práticas, restritas à escala do local específico de uma escavação, já a deteção remota abre a possibilidade de estudar fenómenos numa amplitude que abrange toda uma região. Tal expansão de escala introduz novas problemáticas, no que concerne à salvaguarda e gestão eficiente dos dados recolhidos. Neste sentido, é essencial rever e atualizar estas diretrizes para incorporar as especificidades e desafios que a utilização desta tecnologia traz para a prática arqueológica contemporânea (Fernandez-Diaz et al., 2018; Richardson, 2018).

No caso do território português, a supervisão e regulação da proteção de dados são asseguradas pelo

RGPD (Lei n.º 58/2019, de 8 de agosto). Esta legislação desempenha um papel fundamental ao estabelecer diretrizes e padrões para a gestão e proteção de dados em todos os domínios, incluindo, naturalmente, a informação produzida pelas ciências. A gestão de dados arqueológicos é por sua vez realizada pela entidade de tutela Património Cultural, Instituto público.

Na academia, discute-se ainda uma outra problemática, relacionada com a disponibilidade dos dados e a sua afetação na proteção dos sítios arqueológicos. Se, por um lado, a divulgação ampla e sem restrições de informações relacionadas com estes sítios poderia, em teoria, fomentar o alerta e a sensibilização do público, como a educação sobre a importância do património histórico; por outro, tal abertura pode carregar consigo um risco, tal como se observa noutros países, de incentivar ações de vandalismo e pilhagem, colocando em perigo a preservação destes locais (Krieger, 2014; Frank et al., 2015; Parcak, 2019).

Neste contexto, é urgente reavaliar a abordagem atual para a proteção e acesso aos dados arqueológicos, procurando estratégias que garantam maior segurança, sobretudo nos sítios arqueológicos submersos, sem comprometer o progresso da ciência.

A tecnologia LiDAR, além de ser uma ferramenta promissora no esforço de preservação ao ajudar na identificação, também pode desempenhar um papel positivo na salvaguarda da integridade de sítios arqueológicos (Comer et al., 2013). A equipa de Fisher (Fisher et al. 2017) aponta que, através de uma análise minuciosa e detalhada, os gestores e os arqueólogos podem encontrar soluções que conciliem o desenvolvimento necessário e a preservação histórica, garantindo que a riqueza arqueológica seja mantida e respeitada.

Esta questão é particularmente relevante na gestão de riscos e na compreensão das alterações provocadas por impactos ambientais, onde o património em risco, sobretudo costeiro parece estar mais exposto a destruição (Figueiredo & Martinville 2024; Águeda Figueiredo & Martinville, 2004).

CONSIDERAÇÕES FINAIS

Neste artigo, ressaltamos a importância de adotar uma abordagem responsável no manuseamento dos dados LiDAR. Destacamos a urgência de rever as normas que orientam a investigação arqueológica que utiliza esta

tecnologia. A análise dos dados recolhidos sublinha a importância de considerar questões relacionadas ao acesso aos dados desde o início do processo, antes mesmo da recolha propriamente dita. Além disso, salientamos a necessidade de estabelecer orientações e estratégias de acesso abrangentes para facilitar a partilha de informações entre especialistas e melhorar a gestão dos dados obtidos. Reparamos que existem diversas políticas de acesso aos dados em contextos arqueológicos, cada uma refletindo as particularidades do seu respetivo projeto. Observamos que as atuais diretrizes arqueológicas em Portugal não abordam adequadamente os desafios associados ao uso dos dados LiDAR.

Este artigo pretende promover um debate crítico sobre a revisão e atualização das normas arqueológicas para o uso de dados digitais, especialmente aqueles provenientes do LiDAR, destacando a urgência em integrar regulamentações específicas para a partilha de dados na prática arqueológica contemporânea. A atualização das diretrizes arqueológicas é fundamental para acompanhar os avanços tecnológicos e as mudanças nas metodologias de recolha, análise, armazenamento e partilha de informações.

A inclusão de diretrizes relacionadas a este tema, que abrange a disponibilização e uso dos dados por vários investigadores e instituições, é especialmente importante devido ao aumento significativo no uso de tecnologias que geram grandes quantidades de dados geoespaciais. Estas normas devem abranger tópicos como o acesso aos dados, segurança da informação, direitos de propriedade intelectual e ética na divulgação de informações sensíveis. Além disso, é fundamental estabelecer diretrizes claras para padronizar e documentar os dados arqueológicos, assegurando a sua integridade, interoperabilidade e capacidade de reprodução.

Por estes motivos, convém que a comunidade académica se una neste debate para encontrar as soluções mais apropriadas. Ao atualizar as diretrizes arqueológicas para incluir normas sobre a partilha de dados, investigadores e profissionais do setor poderão conduzir os seus projetos de forma mais eficaz, colaborativa e ética. Isto também incentivará uma maior transparência no acesso às informações arqueológicas, beneficiando a comunidade académica, os gestores do património cultural e o público em geral. Não querendo entrar em mais pormenores sobre o tema abordado, este artigo serve como um

apelo à ação, estimulando reflexões sobre os desafios trazidos por esta tecnologia e a adoção de práticas responsáveis e sustentáveis na investigação, gestão e preservação do património.

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Towards a Definitive Universal Definition: A Dialectical Synthesis for the Definition of the Terms “Shaman” and “Shamanism”

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ABSTRACT

Key-words:

Shamanism;
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Altered States of Consciousness;
Ethnography;

The definitions of the terms “Shaman” and “Shamanism” have long been contested, and the lack of a clear, definitive, synthesised (or scientific) definition of these terms has been debilitating for the study of this phenomenon within and outside this field of study. Despite calls to re-evaluate or use different terms, “Shaman” and “Shamanism” have persisted. The many slightly different definitions can be confusing. Furthermore, the popularity of shamanism has grown considerably in recent decades. A clarification of these terms is therefore needed to resolve the issues behind them once and for all. The author uses a dialectical methodology to review previously proposed explanations, definitions and some criticisms, then breaks down the components of the terms “Shaman” and “Shamanism” so that researchers can better understand them, and then, based on this, proposes a conclusive synthesis for the final definition. The aim is to look objectively at the terms “Shaman” and “Shamanism” to the best of our current scientific knowledge. This study excludes neo-shamanism and considers it as a separate phenomenon.

RESUMO

Palavras-chave:

Xamanismo;
Xamã;
Psicobiologia;
Práticas Mágico-religiosas;
Cultura;
Estados alterados de consciência;
Etnografia;

As definições dos termos Xamã e Xamanismo têm sido disputadas desde há muito tempo e a falta de uma definição clara, definitiva e sintetizada (ou científica) destes termos tem sido debilitante para o estudo deste fenómeno dentro e fora desta área de estudo. Apesar dos apelos para reavaliar ou utilizar termos diferentes, “Xamã” e “Xamanismo” têm-se mantido. As muitas definições ligeiramente diferentes podem ser confusas. Além disso, a popularidade do xamanismo tem crescido consideravelmente nas últimas décadas. Por conseguinte, é necessária uma clarificação destes termos para resolver de uma vez por todas as questões subjacentes. O autor utiliza uma metodologia dialética para rever explicações, definições e algumas críticas anteriormente propostas, depois decompõe os componentes dos termos “Xamã” e “Xamanismo” para que os investigadores os possam compreender melhor e, com base nisso, propõe uma síntese conclusiva para a definição final. O objetivo é analisar objetivamente os termos “Xamã” e “Xamanismo” de acordo com o melhor dos nossos conhecimentos académicos actuais. Este estudo exclui o neo-xamanismo e considera-o como um fenómeno distinto.

INTRODUCTION

The terms “Shaman” and “Shamanism” has earned many meanings and connotations associated with it over the years for better and for worse. It is a term that has been overused and misused (Hultkrantz, 1993; Francfort & Hamayon, 2001) and applied to anything that appears remotely related to nature-based or animistic belief systems and associated magico-religious practices in

modern culture and further afield. This has become problematic. The term Shaman has, at times, been over generalized, often leading to many issues inside and outside of academia in relation to the term’s usage. Furthermore, it hasn’t helped that the term shaman originally came from the Tungusic term Šaman (Diószegi 1998; Eliade 1989) which is culturally specific. In fact, almost all cultures that have “Shamans” also have their own names for them (Eliade 1989). The terms “Shaman” and “Shamanism” have been in use for at least around

four hundred years by academics, as seen by Nicolaes Witsen's 17th century depiction. Attempting to change a term that is widely recognized and has been in use for so long poses many issues, ignoring it when applicable can cause confusion, and, whilst attempting to list all culturally appropriate terms for a shaman, while ideal, are impractical for researchers in research papers. This is especially the case when referring to the global spread of a practice or set of practices and beliefs that we as academics already recognize through common sense as shamanism.

Through dialectical reasoning I show the terms 'shaman' and "Shamanism" possesses a specific meaning (or set of meanings) and defines a distinct type of magico-religious practitioner which researchers have picked up on but have been unable to provide a conclusive definition for. This paper is a move to clarify the terms we are stuck with; this is not a reinterpretation nor a redefinition of the terms "Shaman" or "Shamanism". The author will attempt to demonstrate this below. What follows in the following section, through a dialectical methodology, involves former and current definitions and descriptions for the terms "shaman" and "shamanism" as well as a rough ethnographic background.

METHODOLOGY

The author will present some definitions for the terms shaman and shamanism presented by past academics below and utilize a dialectical methodology to produce a synthesis from these former definitions. It is important to note that while some academics have offered up clear interpretations most have approached it from a descriptive manner (predominantly based in ethnography). The reason for this, as we shall see later, is due to the sheer complexity of this magico-religious phenomenon and what this term entails. The method the author uses utilizes the terminology/definition paradox first pointed out by Hamayon (2001).

The primary issue of modern definitions is that they tend to be culture free (Hamayon, 2001), which risk mixing up different magico-religious psychobiological practices with each other. This can be seen by Facco, Tressoldi, and Francas's research on NOME's (Non ordinary mental expressions) where they classify all various types of extraordinary human experiences as psychobiological in origin (2021), whereas we know that shamanism is a specific type of psychobiological phenomenon. However culturally specific definitions

struggle to be applicable to the global similarities between shamanic practices (Hamayon, 2001).

Therefore, the method the author utilizes is a dialectical discourse (Cunha, Vieira da Cunha, Clegg, 2000; Nehamas, 1990) to present, analyse, and critique the definitions of past and present scholars before utilizing the terms presented here to synthesise a definition after breaking down the complex meaning behind the terms "Shaman" and "Shamanism". Dialectical discourse presents the thesis/theses (current and/or former definitions in this instance), the antithesis (critiques or alternative definitions to the thesis), and then culminates in a synthesis where the useful and functional components of these theses and antitheses (definitions and critiques) are combined to reflect a more accurate definition that better reflects how current scholarship is using and should use these terms. The data being put through this dialectical methodology are the former definitions, alternative definitions, and critiques postulated by previous researchers. By extrapolating from these definitions and critiques, plus some ethnographic data, the functional components of these definitions (as most have merit) will be reformulated to form a synthesis.

PAST DEFINITIONS AND DESCRIPTIONS

The original meaning – Below the author offers two uses of the original meaning, 1, being the most appropriate:

1) A Shaman specifically refers to the Tungusic speaking people's magico-religious healer called a Šaman and all cultural, religious, practice based, and cosmological associations that come with it (Eliade 1989). The term Šaman translates as "He who knows" (Diószegi, 1998) which is somewhat also unhelpful if used universally to apply to shamans around the world.

2) The religion of the Siberian tribes (limited to this region including Mongolia) where there was a belief in secondary gods where the shamans/ priests could influence them (Fowler & Folwer, 1964).

Diószegi's definition – Diószegi's definition is culturally specific, primarily to Siberia, and is more descriptive than a concrete definition. Diószegi believes that shamanism proper is found within "specific notions, actions, and objects connected to the ecstatic state" Diószegi also refers ecstasy as a "psychosomatic phenomenon" (Diószegi, 1998).

A selection of specific traits Diószegi presents include: "specific individuals selected by the community to communicate with the spirit world; someone with abnormal physical or mental characteristics; has a group of active spirits to help them; a spiritual illness or the absence of a patient's soul; the initiation may require a ritual death of the shaman but may differ depending on ethnic group; falling into ecstasy at will and navigating that experience with the soul leaving the body, communicating with spirits or channelling their voice; the ability of shamans to combat each other in animal form; the shaman's equipment; and lastly folklore including songs" (Diószegi, 1998). For Diószegi, shamanism exists among people who are primarily hunter gatherer, but continued among pastoralists and horticulturalists (Diószegi, 1998). Vilmos Diószegi was a Hungarian anthropologist who was active between 1947 to around 1972 primarily focusing on shamanism as his topic of research (Diószegi, 1998). This is a good definition but is culturally specific and therefore gives rise to complications when applying this as a definition to a global phenomenon of shamanism in a scientific or universal manner.

Eliade's definition – For Eliade the shaman could fill many roles in a society from magician and herbalist to priest but the one key thing that defined it for Eliade was the shaman's singular mastery of altered states of consciousness where the shaman alone is "The great master of ecstasy" (Eliade, 1989). Whereas Eliade's definition of shamanism is a "technique of ecstasy" (Eliade, 1989).

Hultkrantz's definition – "The central idea of shamanism is to establish means of contact with the supernatural world by the ecstatic experience of a professional and inspired intermediary, the shaman" (Porterfield, 1987). This is a rather straightforward definition but requires more context, especially for use in academic literature given the development in academic approaches to shamanism (psychobiological approaches for instance).

Harner's Definition – "A man or woman who is in direct contact with the spirit world through a trance state and has one or more spirits at their command to carry out their bidding for good or evil. Typically, shamans bewitch persons with the aid of spirits or cure persons made ill by other spirits, whether sent by another shaman or simply acting on their own volition.



Figure 1: The famous depiction of a Siberian shaman by Nicolaes Witsen from the 17th century. 'Een Schaman ofte Duyvel-Priester in't Tungeesen lant' - 'A Shaman or Animal Priest in the Tungus land' (Author's own translation). The earliest known depiction of shamanism in Europe is from four hundred years ago of a Tungusic Sáman, which is believed to be the origin of the term 'shaman' in academic discourse. This far predates the 19th Century American scholar's use of the term. Where the etymological roots of the Tungusic term Sáman comes from is an interesting but separate debate.

Depending on the traditions and beliefs, a shaman may influence the course of events, find lost or stolen objects, divine the identities of people who have committed crimes, communicate with the spirits of the dead relatives and friends of clients, foretell the future, and practice clairvoyance" (Harner, 1972). It should be noted that much of Harner's ethnographic experience was limited to the Americas. In Harner's later works he proposes the concept of "Core" shamanism that suggests shamanism is a culture free and universal phenomenon that anyone can access (Harner, 1990). A culture free approach can be confusing as, scientifically speaking, the neoshamanic movement is not necessarily the same thing as traditional indigenous practices of shamanism par excellence (Scurro and Rodd, 2015).

Porterfield's Definition (1987) - Porterfield offers a psychosocial definition/ interpretation of shamanism. It is a detailed, critical and well-presented paper. Porterfield's approach allows for the phenomenon of shamanism to be related to the community and its use in dealing with social tension. Porterfield defines shamanism in a psychosocial framework as follows: 'as a performance in which the psychosocial dynamics that govern persons and groups are projected in the form of spirits and represented in the visible movements of the shaman's body... The psychosocial interpretation of shamanism recognizes these spirit manifestations as disguised representations of human desire, just as it recognizes the shamanic dances that embody the spirits and their demands as also being representations of human desire... the widespread cultural sanction of shamanism can be explained by showing that shamanic rituals function as means of dramatizing and resolving social tension' (Porterfield, 1987). This is a valid perspective, and the practice of shamanism, or an aspect of it, almost certainly does operate in this manner. However, this is a reductionist approach as this could be applied to any number of magico-religious practices beyond shamanism. It also omits explanations for why this practice is sometimes conducted in private, it is not always public. It also omits to tackle the concept of spirits. However, Porterfield is guilty of what the eminent anthropologist Victor Turner defines as a "theological position" where the researcher is trying to "explain away religious phenomena as the product of psychological or sociological causes... denying them any preterhuman origins" (Turner, 1995).

Winkelman's Definition – Winkelman describes shamanism as a Neurotheology, that is, a source of religion or spirituality founded in the psychobiology and neurology of the human being (Winkelman, 2002a; 2002b). His best description is conducted in his paper on "Shamanism and Cognitive evolution" (Winkelman, 2002a) and in his 2022 paper on "Ethnological Analogy and Biogenetic Model for Interpretation of Religion and Ritual in the Past" (Winkelman, 2022). In this author's opinion he is only just short of creating a conclusive scientific or universal definition.

Winkelman refers to "The Shamanic Paradigm" incorporating the innate human psychology that lies behind shamanism into his research (Winkelman, 2015). He also believes, based on cross cultural analysis, that Eliade's research was correct (Winkelman, 2015; Winkelman, 1993). As such Winkelman's research points directly to a psychobiological origin for shamanism.

Winkelman's 2022 paper identifies many specifics within shamanic practice, differences between different types of shamanic practice, as well as between other religious practices (Winkelman, 2022). He also proposes and demonstrates, via cross cultural empirical research, the evolution of religious practices and determines that the survival strategy of said society is crucial in their selection of religious activities and beliefs (Winkelman, 2022). Furthermore, he also approaches shamanism from a social and medical perspective demonstrating a robust polysemic and integrative approach to the phenomenon (Winkelman, 2022).

This view seems to be widely accepted by 2023 but there is an issue. Facco et al accept such altered states as part of the psychobiological experience and considers all major types of non-ordinary human experiences to be psychobiological in origin (Facco, Tressoldi & Francas, 2021). This shows us that altered states are not exclusively tied to shamanism alone and therefore we do need to be more specific in our definition of what we mean by a shaman or shamanism so we can differentiate between experiences. This indicates the importance of incorporating the cultural dimension into the final definition which helps to better clarify the phenomenon.

Lewis Williams & Dowson's Definition – Lewis Williams, Dowson and Clottes approach and describe shamanism primarily from a psychobiological perspective believing it to be inherent or founded in the human nervous system (Lewis Williams and Dowson 1988; Clottes & Lewis-Williams, 1998; Clottes, 2016).

This again has some issues as it does not incorporate the cultural dimension which helps to better clarify the practice.

Popularly – At a popular level the terms shaman and shamanism are used in referring to a nature based religious belief system. The term is sometimes used in this way by academics. The use of the term shamanism in this way is erroneous when applied to phenomena not associated with the new age religious movement (and neo-shamanism¹). In a similar manner (and for the same reasons) it is also somewhat erroneous to refer to shamanism as an institution (or at least what we understand as an institution), though exceptions may apply. This is an easy mistake to make as the way in which shamanism is presented to us, even by Eliade, suggests that it is a religion. However, shamanism is the practice performed by specific initiated individuals. These individuals may journey to various places in trance (often related to the culture's religious beliefs and cosmologies) or to real locations that comprise a part of the culture's sacred landscape and, depending on the events that occur in the ritual, may add details to the culture's overarching belief system or cosmology (Gheorghiu et al 2017)².

There are several ways in which this term is popularly used whether accurately or inaccurately identified from the author's own personal experience:

- An individual who can interact with the spirit world.
- An individual who can interact with the spirit world via altered states of consciousness.
- A believer in shamanism as a religion.
- A believer and practitioner of nature-based religions called shamanism or somewhat related to it.
- A believer and/or practitioner of animistic based religions or beliefs.

DEFINITION CRITIQUES

Bahn's Definition/critique - The term shamanism is confusing and obscure and therefore no meaningful assessment can be made from it. The literature is oversaturated with this term, and it is used to refer to a supposed global religion (Bahn 2001; Bahn 2010).

This is a justified critique mainly resulting from a lack of a clear definition.

Hamayon's Definition/critique – Hamayon identifies the paradoxes from viewing shamanism from a primarily cultural perspective which - "fails both to account for (at least apparent) similarities in a large number of various cultures and to provide a basis for theory" and the culture free perspective which - "fails to account for cultural variability and sinks into trite generalities" (Hamayon, 2001). Both are valid critiques. Hamayon then asks one of the most crucial questions in this debate "Is shamanism basically and ultimately the expression of a type of religion or worldview or of a type of personality or innate inner disposition" (Hamayon, 2001) adding "Is it specific to a certain type of individuals or inherent in human beings?" (Hamayon, 2001).

As Klein somewhat sums up: "One scholar's shaman, in other words, is not necessarily another" (Klein et al, 2001). However, it is clear that most of the definitions do share strong similarities with each other. Though it is clear some heavily lean towards the anthropology (culture specific) such as Harner, Fowler & Fowler, and Hultkrantz (Harner, 1972; Fowler & Fowler 1964; Porterfield 1987, p 722), Eliade's definition also leans towards the anthropology (and arguably phenomenology) (Eliade, 1989), Porterfield's leans towards the psychosocial (Porterfield, 1987), whilst Lewis William's, Dowson's, Clottes's, Harner's (later on), and Winkelman's definition lean primarily towards pure science and psychobiology (Lewis Williams and Dowson, 1988; Clottes & Lewis-Williams, 1998; Clottes, 2016; Harner, 1990; Winkelman, 2002). None of these definitions are incorrect. The critics (Hamayon, 2001; Bahn, 2001; Klein et al 2001; Bahn, 2010) aren't incorrect either.

The similarities between the definitions are present but it is a matter of taking them apart, identifying those components and then putting it all back together. This follows a dialectical discourse and a history of the terms; Clearly shamanism was first identified as an indigenous practice which was initially considered culturally specific (Eliade 1989; Fowler & Folwer 1964; Porterfield 1987). Later, as ethnographers continued to find more shamanic practices around the world it became clear (perhaps unofficially at first) that they were dealing with the same type of phenomenon as exemplified in the following references (Eliade 1989; Harner 1972; Harner 1990; Crothers 2012; Whitley

¹ For a definition on neoshamanism see Scuro and Rodd, 2015.

² Even in my own ethnographic research in Mongolia I have met shamans who have insisted that shamanism, at least in Mongolia, is not a religion. Claiming that shamanism is a religion brings many issues in its own right, especially if referring to the global usage of the terminology, though in culturally specific settings it is more variable.

1992; Adams & Brady 2005; Jolly 2006; Evans Pritchard, 1976; Otagony & Gurbadaryn, 2006, Ponomareva, 2021; Elkin, 1993; Guerra-Doce, 2015; Bourguignon, 1973; Metzner, 1998; Diószegi, 1998; Peoples, Duda & Marlowe, 2016; Rast & Wolff, 2016; Helskog, 1987). To compensate for this worldwide similarity, first Eliade tried to offer us universal archetypes (Eliade, 1989) yet when this was ruthlessly criticised, academia eventually turned to something which is also universal and common among all these different peoples, the human nervous system and psychobiology (Lewis Williams and Dowson, 1988; Clottes & Lewis-Williams, 1998; Clottes, 2016; Harner, 1990; Winkelman, 2002). As the critics point out the term is still not clear as there are clearly very noticeable differences between shamanism in different parts of the world and the universal psychobiology can generalize too much even to religions that also engage in altered states but are not shamanic (Bahn, 2001; Klein et al, 2001; Bahn, 2010; Facco, Tressoldi & Francas, 2021; Hamayon, 2001).

It is clear the terms shaman and shamanism refer to both something universal yet also specific within that universality. It is clearly both psychobiological and cultural. The author found that, ironically, Eliade's classification to be the clearest where the shaman is "The great master of ecstasy" and shamanism is a "technique of ecstasy". He refers to the universal psychobiology (master of ecstasy) and the cultural variations (the techniques). There is a bit missing from Eliade's definition. This is where he should have incorporated the importance of this phenomenon being found in hunter gatherer, pastoralist and, to a lesser extent, horticultural (and sometimes agricultural) contexts.

To address Hamayon's critique Eliade presents the shaman as the psychological state (culture free & universal) and the shamanism being the technique (culturally specific).

TERM BREAKDOWN

The author will now resolve and present a solution to the Shaman & Shamanism terminology paradox outlined by Hamayon (2001) and also expounded upon by past critics and supporters of the term. The author will attempt to do so in a dialectical manner. Shaman and Shamanism are complex terms with many meanings behind them. Therefore, to understand and clearly define them these complex terms must be

broken down into smaller explanations that relate to the above definitions and critiques. The author requests that readers note closely the all bullet points and footnotes below as to avoid misunderstanding:

1. 'SHAMAN³' (ASCs, NOMEs) = Psychological/ Psychobiological phenomenon.

This psychological phenomenon is based in the human nervous system, neuro optic network and psychobiology which is universal. However, there are two classifications that can be made in this category.

a) Specific individuals that are more prone to ecstatic states than others (specific personalities and dispositions) are traditionally those who become shamans par excellence⁴.

b) Self-made shamans who may not be naturally prone to ecstatic states and choose to become shamans, or other types of magico-religious practitioners.

2. SHAMANISM = Worldview, culture, practice, and the techniques of shamanism. This can be split into two key separate parts:

- Shamanism (the techniques) is specific to each separate culture and is not universal per se⁵ when viewed in its exclusive cultural context. This may be due to environmental differences, socio-cultural differences, or religious differences etc. Environmental differences are very important to consider when looking at material culture.
- We are predominantly referring to material culture, magico-religious psychobiological practices, the traditional knowledge and cosmologies (mainly animistic, afterlife, & shamanic⁶ in nature⁷)

³ Even though point 1 states 'Shaman', this is for the benefit of how the term has been used (or misused) in the past, more accurately it should be NOMEs/ Altered states of consciousness as this refers to a purely psychological/ psychobiological phenomenon. A shaman proper is explained in point 3 and below.

⁴ Such personalities in non-shamanic cultures (i.e., the individual has point 1a but not point 2) may become gifted mystics or other types of magico-religious practitioners instead.

⁵ Researchers may wish to counter with Harner's concept of core shamanism on this point, and in terms of aims they may be correct; however, core shamanism is an invention of Harner based on his research. It is not a nuanced traditional indigenous shamanic practice (set of techniques) in its own right, even if it is inspired by them. Alternatively, researchers may wish to counter with Eliade's work on universal shamanic themes, the author will simply state that more research will need to be conducted on this as such universals, if true, may have psychobiological origins rather than cultural or phenomenological ones.

⁶ Visiting and interacting with other worlds/ spirit worlds, spirits and predominantly nature based supernatural forces via altered states. But also, how such spirits and other worlds interact with our own independently.

⁷ The author has selected these three based on the research presented by Peoples et al (Peoples, Duda & Marlowe 2016). Societies that are animistic or

predominantly found in traditional societies that practice shamanism such as hunter gatherer, pastoralist and horticultural societies (though they are not exclusively limited to them).

- However, the aim of the practice and techniques of shamanism remains the same and is the universal part of the practice – to equip the practitioner (most often the shaman) with the means to enter into altered states of consciousness and navigate that experience.

The two separate parts are often combined when we refer to shamanism. Which again has led past researchers and laymen to be confused as to whether it is a culturally specific phenomenon or a universal one. Simply put it is both. What matters is whether the emphasis is put on the practice/techniques or the aims. When referring to the term shamanism as a universal term researchers must be aware of the variations between the different practices and techniques cultures utilize that are deemed shamanic. Similarly, researchers who are making a point of a specific practice or technique being shamanic must keep in mind the universal aim of the shamanic practice. Point 2 covers the material culture and the traditional knowledge that is often found in traditional societies that practice shamanism such as hunter gatherer, pastoralist and horticultural societies (but are not necessarily limited to them).

3. A SHAMAN PROPER = Point 1 is essential however it must be combined with either;

a) Point 2 or,

b) In the absence of point 2 the 'shaman' must possess the ethnographically based abilities, knowledges and duties befitting a shaman proper (which roughly run along the definitions outlined by Harner, Hultkrantz). This is harder to determine as such definitions deal with more intangible and culture-based data. An individual who fits point 1 but not point 2 (or without all the duties, knowledges and abilities a shaman should possess, i.e., point 3b) could be a Gnostic, or an ancient Greek at the Eleusinian mysteries (they are not shamans as neither their culture or practice [point 2] nor their abilities, knowledges and duties [Point 3b] are that of a shaman or shamanic society despite the similarities⁸).

have beliefs in the afterlife don't have to be shamanic.

8 Though it is possible such ecstatic and magico-religious traditions derive from shamanic practice earlier in the culture's history. This would need to be proved via empirical data such as archaeological evidence of shamanic burials in the region or by analysing, comparing and contrasting such a culture's my-

Points 1 & 2 must be combined in order to be certain that it is a shaman proper, especially if looking into the archaeological or ethnographic record and other hard data. In the absence of point 2 a number of possibilities open up to different ecstatic and magico-religious traditions which can cause complications and misunderstandings. In such a case point 3b becomes important in determining a shaman but relies on more intangible heritage, data, and in-depth knowledge on shamanic practices and experiences thus making the discernment process more complex.

This way the terms take into account the available literature, ethnography, and scientific research into the phenomenon of shamanism concerning psychology, neuroscience and biology. It also takes into account the cultural perspective as well. Furthermore, it takes into account the differences between shamans (i.e., those who are naturally gifted/chosen vs a personal choice in points 1a and 1b) and hopefully better defines this complex phenomenon. Therefore, a shaman proper is a complex mix of universal and personal psychobiology⁹, individual personality¹⁰, and culture¹¹ all contained within a single individual (often one who has a natural proclivity to enter such altered states¹²). That is why this term has been so difficult to define over the decades as there are many components that create a shaman. It is even more difficult when one considers the numerous magico-religious practices that exist (and have existed) that may utilize some form of altered state or NOME and the close similarities between some of these practices (examples include Greek and Roman necromancers [Ogden, 2001], theurgues [Edmonds & Radcliffe, 2019; Lewy, 1956; historic European witchcraft [Harner, 1972; Hutton, 2017], etc) not to mention the many different cultural variations of shamanism (the techniques).

Shamanism proper refers to the culture and techniques behind the shamanic practice. This may vary from culture to culture. However, the shaman may journey into the 'otherworld's' via altered states of consciousness/NOME (of which they are specialists) to gain knowledge or help for others or themselves. While in these "otherworld's" or even in relatively ordinary states of consciousness

thologies and cosmologies to shamanic ones.

9 Point 1 and Point 1a.

10 Point 1a or 1b (where appropriate).

11 Point 2 and/or 3b (where appropriate).

12 This definition maintains that shamans remain, primarily, the specialist of altered states of consciousness (and/or NOMEs) and the spirit world of their respective culture demonstrating how important point 1 is for the classification of a shaman proper. Without point 1 there is no shaman but there can still be shamanism (the practice, beliefs and cosmology) in a culture which can continue after all such specialists are gone.

(half trance) they interact with various spirits or other entities and may use their own gifts and abilities, to help (or harm) others. Themes such as flight and spirits play a massive role for shamans, shamanism and shamanic practice as a whole.

The experiences in these altered states and the means by which to enter into them (even if only symbolically) is culturally informed. By this the author means that the culture in which the shaman is taught and initiated equips them with the tools, equipment, knowledge, and cosmology for the shaman to utilize in their practice.

Some of this equipment, knowledge and cosmology will be based on the culture's natural environment, heritage, and traditions. As such the practice of shamanism may differ from culture to culture based on these factors (for example one society may use hallucinogens to enter trance whilst another will use drumming and dance). However, the cultures where shamans and shamanism most often appear (or have most often appeared) is in hunter gatherer societies, pastoralist (nomadic) societies, and in some horticultural societies.

Shamans and shamanism tend to have a strong nature orientated belief (which may vary depending on their natural environment), otherwise often referred to as animism. As such the shamans costume, tools, symbols and instruments will traditionally reflect this connection (i.e., feathers, animal pelts and/or bones [birds, cervids, bovids, big cats, bears, etc], and plants/plant matter [i.e., herbal, psychoactive, or culturally symbolic, etc]) which may differ depending on the surrounding environment and available fauna and flora.

Winkelman's research in his 2022 paper also supports the above "The cross-cultural presence of shamans in foraging societies illustrates that shamanism is an ecological adaptation that manifests features reflecting the ethos of a foraging society" (Winkelman, 2022). Yet in Greece during the period of colonization of the north-western Black Sea coast clear influences of shamanism were also observed (Dodds, 1973).

RESULTS

When referring to the terms shaman and shamanism the researcher is referring to a complex and nuanced term that is symbiotic in nature. As such the author will clarify his definitions in a simpler manner focusing only on the shaman and shamanism as universal terms in relation to the above explanation in this chapter:

- A *shaman proper* is an individual who engages in (and is a master of) magico-religious psychobiological experiences (altered states of consciousness/NOMEs [formerly known as "ecstasy"]) through the culturally informed paradigm/practice of shamanism (the techniques, cosmology, and worldview) primarily specific to an indigenous culture based in animistic cosmologies. Such an individual may also possess a natural proclivity to enter into such altered states of consciousness (therefore demonstrating how an innate personality/disposition can be naturally suited to this role). A person who engages with magico-religious psychobiological experiences (altered states of consciousness/NOMEs) without the culturally informed paradigm/practice of shamanism is not a shaman. Such an individual may be a different type of magico-religious practitioner e.g., a roman theurge attempting to attain union with the divine via mystical means.
- *Shamanism* is a culturally informed magico-religious psychobiological practice (technique/set of techniques) often based in animistic cosmologies in mainly indigenous hunter gatherer, pastoralist/nomadic, and sometimes horticulturist settings. The practice (techniques, cosmology, beliefs etc) may differ from culture to culture yet the aims remain the same; to enter into an altered state of consciousness and to gain some form of knowledge, ability, or action from it to help or harm a person or community. This may be traversing spiritual other worlds, or conversing with spirits etc. The culture behind this type of practice is often based in animistic beliefs, potentially afterlife beliefs, and shamanic cosmologies. The leaders of this kind of practice are trained and initiated individuals called shamans (or prospective shamans) who are taught their specific practice/technique of shamanism from their culture and are the experts (from this perspective) of utilizing and navigating altered states of consciousness. The cultural part of Shamanism generally pertains to a specific set of cultural worldviews that are predominantly animistic, afterlife based, shamanic and nature based, found in many, but not necessarily all, indigenous communities and religions. The classic material culture of this type of practice is often found in traditional indigenous societies that are generally hunter gatherer, pastoralist and/or

horticultural in nature which have been influenced by their natural environment.

The author has referred to the many cultural nuances and differences the practice of shamanism possesses. However, universals such as the abundance of trance, and entoptics seen in different stages of trance, merit further study. In a similar manner Eliade's work on the universals of shamanism, if true, may have psychobiological origins as opposed to a cultural or spiritual one and merits a review.

Though shamanism is often found in Hunter gatherer, pastoralist and/or horticulturalist cultures it is not necessarily limited to them, but it is likely that shamanism exists in a more "undisturbed" form in such cultures. Also, the author does not claim that, given most of human history was considered hunter gatherer, that all of humanity in the past was shamanic/ practiced shamanism in some form or other. However, the author does not rule this out as a possibility.

The author will reiterate that this definition is not applicable to the phenomenon of Neoshamanism. For a definition of Neoshamanism the author recommends the paper by Scuro and Rodd (2015).

Finally, although this paper seeks to resolve the disputes surrounding the terms "shaman" and "shamanism", it is probable that scholarly debate on this subject will, nevertheless, persist, with academics continuing to diverge in their views on whether specific cultures and practices align with this paradigm.

DECLARATION OF INTEREST STATEMENT

The author has no relevant financial or non-financial competing interests.

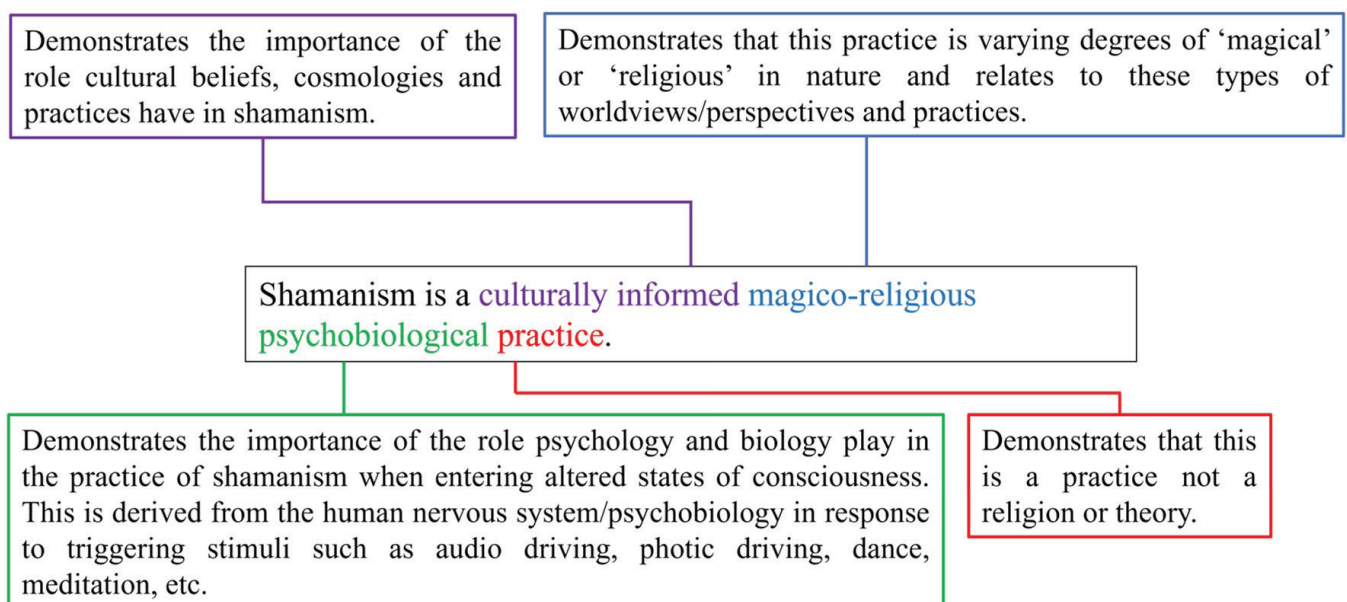


Figure 2: Definition explanation and breakdown for further clarification.

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