Exploring indigenous perspectives of an environmental disaster: Culture and place as interrelated resources for remembrance of the 1960 mega-earthquake in Chile

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\textbf{A B S T R A C T}

On May 22, 1960, the most powerful earthquake recorded in history shook the coast of southern Chile: the ‘Valdivia Earthquake’. The areas around the Budi Lake, eighty kilometers from the epicenter, are lands of the Lafkenche-Mapuche indigenous group. The present study explored the role of culture and place in the remembrance and meaning-making processes of the earthquake in Lafkenche-Mapuche community members. Semi-structured qualitative interviews with eighteen participants (N = 18) were completed. Through the use of decolonial narrative analysis, findings were organized around two themes describing how cultural and spatial elements in Mapuche communities can afford systems of meaning to remember and make sense of an extreme environmental event like a devastating earthquake. Results provide insight into how indigenous communities recollect sacred oral histories, tap into reserves of traditional ecological knowledge and adapt to shifting landscapes, which together surfaced as critical dimensions of remembrance, meaning-making and response to environmental hazards and their aftermath.

\section{1. Introduction}

On May 22, 1960, the most powerful earthquake ever recorded in human history shook the southern coast of Chile: the ‘Valdivia’ earthquake (9.5 Mw). The Budi Lake, located approximately eighty kilometers from the epicenter, is a tidal brackish lake whose origin is associated to earthquakes and floods. For more than 500 years, the areas around the Budi have been inhabited by Lafkenche—subgroup of the largest indigenous group in Chile: the Mapuche.

In the face of traumatic events, such as earthquakes, research shows that survivors may engage in meaning-making processes embedded in core beliefs systems related to the sacred and the mundane\textsuperscript{[54]}. These processes have been characterized as highly dependent on a collective memory that reconstructs the events through narratives grounded in the culture of the groups that remember and in the places and environments of their everyday lives\textsuperscript{[35,48,51]}. Moreover, the relations between reconstructive remembrance, culture and place have been addressed in indigenous psychologies and social psychiatry through the study of trauma related to indigenous communities’ journeys facing histories of colonization and ongoing structural oppression (e.g.\textsuperscript{[32,39]}).

\textit{Mapuche} cultural processes related to earthquakes and natural disasters, however, have been primarily studied and documented in the social sciences in the past within Eurocentric worldviews and knowledge systems. In previous studies by researchers in Chile (e.g.\textsuperscript{[29]}), strong relations between \textit{Mapuche} cultural elements (such as ancestral knowledge, beliefs and religiosity) and geographical elements and places (such as volcanoes, mountains and the sea) are highlighted. For example, in 1912, Rodolfo Lenz compiled a series of tales, vocabulary and poetry that reflected the traditions of \textit{Mapuche} regarding earthquakes, floods, tsunamis and volcanic eruptions\textsuperscript{[44]}. More recent research (e.g.\textsuperscript{[15]}) explored \textit{Mapuche} religious practices, stories, poems and songs related to indigenous spiritualities and belief systems linked to ecological and geographical spaces and events, stressing the

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