

From endemic to metal wings: Lake Amik as a witness to the Turkey earthquake 2023

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Introduction

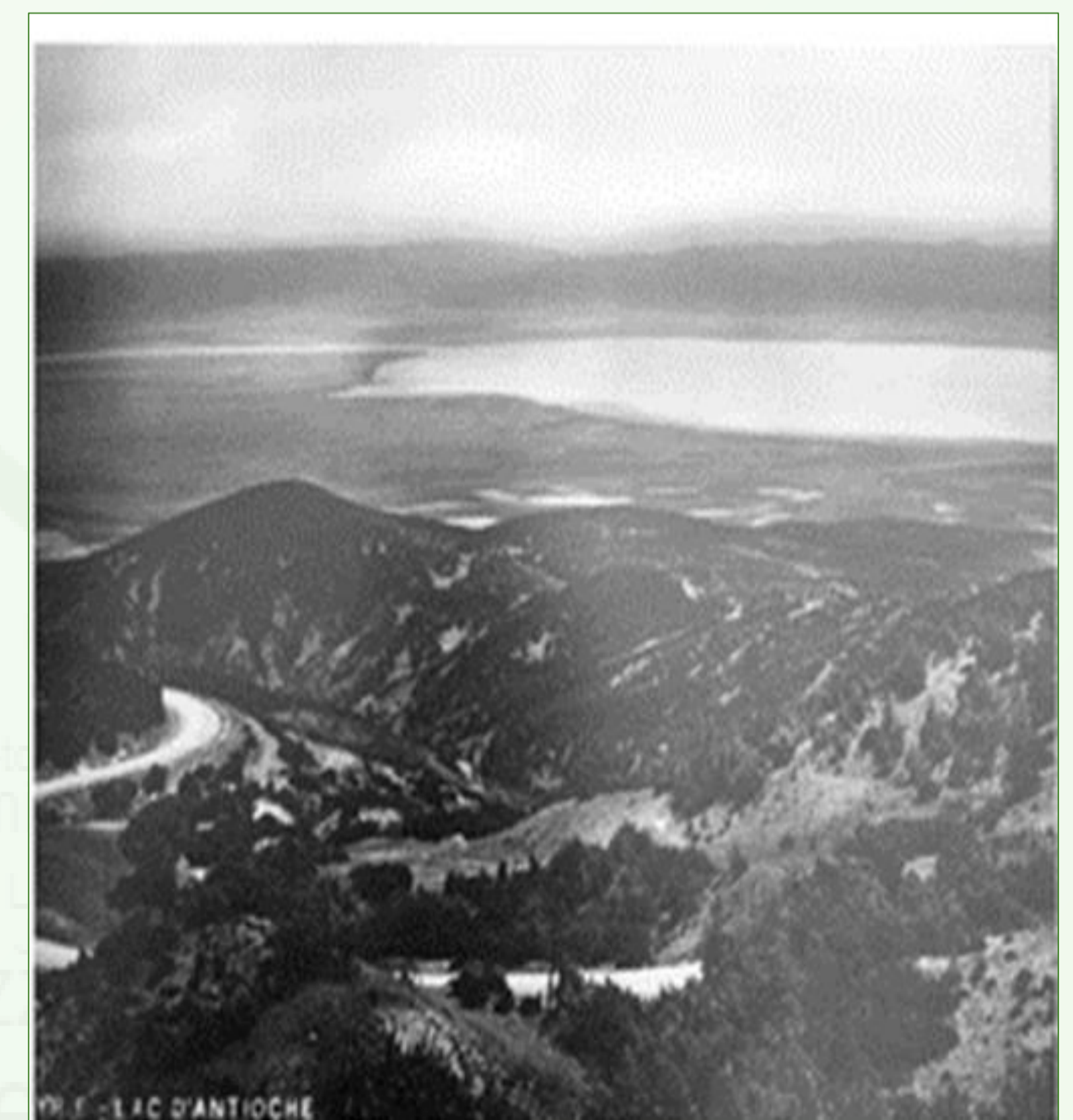
The Amik region has long been a vital crossroads where **various forms of mobility converge and pass through**, with human movement gradually taking priority over natural flows. Historically, this area's appeal for humans has been driven by four key factors: agriculture, water resources, strategic location (along trade and pilgrimage routes), and the presence of valuable natural resources. The region's rich birdlife is a result of its position on the migratory route between Africa, Europe, and the Caucasus. Lake Amik, now drained, was not merely a stopover; it served as a crucial breeding ground and homeland for many bird species. **The allure of the region has prompted interventions that often neglect the dynamic flows of water, clouds, land, wildlife, and human communities.**

Location

Lake Amik (36°18' E, 36°23' N) -> Hatay Airport (36°22'20" N, 36°17'55" E)

Turkey's local airport policy, notable for its extraordinary density of one airport per 100-kilometer radius, stands out as one of the most ambitious globally. **Hatay airport (2007) is constructed within the former Lake Amik area, roughly in the northwest of the lake in the lowest parts of the Amik Plain, including the deepest areas of the former lake**, leading to recurrent floods.

On February 6, 2023, the Kahramanmaraş region in southeastern Turkey was struck by two powerful **earthquakes**, measuring 7.8 and 7.6 on the Richter scale. These seismic events impacted eleven provinces, resulting in over 50,000 fatalities. According to the Chamber of Geological Engineers, the seismic intensity at the area around Hatay Airport reached magnitude 11, caused the airport to split in two, damaged surrounding highways, and temporarily isolated the Hatay region.



The philosophy behind

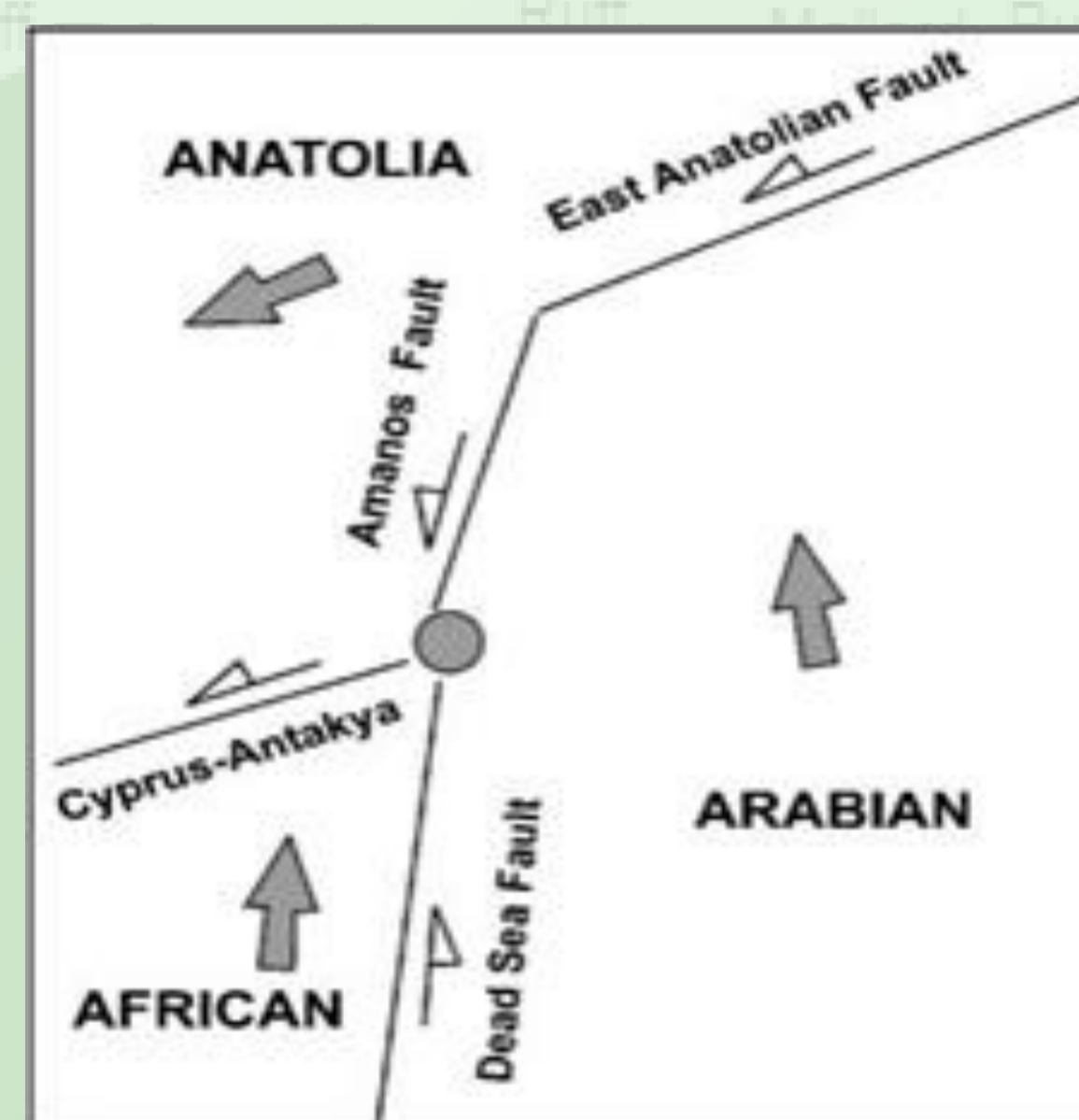
Examining Hatay airport through the lens of critical realist emergence and open system, understanding our alienation from the natural movements of land and water **to capture the non-ecological aspects** to be able to unlock mechanisms at the levels of human agency and social structure.

Not just us: the land has will to move too

Lake Amik is located in the Eastern Mediterranean at the base of the Amik Plain, the southern end of the Antakya-Kahramanmaraş graben. Recent studies identify the Amik Plain as the **location of a triple junction** where the Dead Sea Fault, Karasu Fault, and Cyprus-Antakya Fault converge, significantly increasing seismic risk in the region, including the airport area.

So does the water

Before its drainage in 1975 to combat malaria, protect agricultural lands from flooding, and gain additional farmland, **Lake Amik was the largest freshwater lake** in the Levant, spanning 350 km² with a maximum depth of 4 meters. It had a catchment area of 6,600 km² and experienced significant seasonal water fluctuations (a single expansive lake in winter to three distinct lakes in summer) due to the intricate interactions between the Orontes River, the surrounding mountains, and the sea which allowing marine elements to migrate into the lake. The region's alluvial and Quaternary deposits render the ground highly susceptible to liquefaction, increasing the potential for settlement, subsidence, and structural failures during seismic events.



Discussion

The earthquake has revealed hidden generative structures, highlighting the layered complexity of reality. Understanding that our world operates through multiple layers—each requiring unique approaches based on its emergent properties—is crucial for grasping phenomena like earthquakes. Social events occur on four levels: material interactions with the environment, social interactions, structural frameworks, and individual personalities. The testimony of Hatay Airport illustrates how neglect in material interactions with nature cannot be resolved through legislation or force. Notably, the airport has resumed operations in the same area.

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