Abstract: Archaeological evidence suggests that during the Middle Horizon (AD 600-1000) the Wari imperialist agenda influenced many groups on a broad geographic scale. In particular, Wari imperialism intensified socioeconomic interaction between regional populations in the Peruvian Andes. Biological distance analyses based on cranial nonmetric data give insight into biological relationships between populations over time as a proxy for social interaction. A comparison of skeletal samples dating to the height of imperial administration to the post-collapse period (AD 1000-1400) indicate that populations were more genetically isolated after the collapse of the Wari Empire. These results have important implications for understanding social interaction and how it may be impacted by the economic, political, and ideological ambitions of an empire even in the absence of direct administration.