

Starting in the 1960s and continuing until the 1980s, sailors in Russian submarines patrolling the North Atlantic and Arctic Ocean would occasionally hear strange sounds. These underwater noises reminded the submarine crews of frog croaks, so they called the sounds "quackers" (from the Russian word for frog sounds). The sources of the sound seemed to be moving with great speed and agility; however, the submarines' sonar (a method of detecting objects underwater) was unable to detect any solid moving objects in the area. There are several theories about what might have caused the odd sounds. The first theory suggests that the strange noises were actually the calls of male and female orca whales during a courtship ritual. Orca whales are known to inhabit the areas where the submarines were picking up the bizarre noises. Orcas have been studied extensively, and the sounds they make when trying to attract a mate are similar to those that the submarines were detecting. A second idea is that the sounds were caused by giant squid. Giant squid are giant marine invertebrates that live deep in the ocean and prey on large fish. They are difficult to detect by sonar because they have soft bodies with no skeleton. Not much is known about giant squid behavior, but their complex brains suggest they are intelligent animals. It is possible they have the ability to emit sound, and perhaps they approached the submarines out of curiosity. A third theory suggests the Russian submarines were picking up stray sounds from some military technology, like another country's submarines that were secretly patrolling the area. Perhaps the foreign submarines did not register on the sonar because they were using a kind of technology specifically designed to make them undetectable by sonar. The strange froglike sounds may have been emitted by the foreign submarines unintentionally.

Now listen to part of a lecture on the topic you just read about. Quackers are certainly a very strange phenomenon. Experts still debate what the source of the sounds was. No one can be sure exactly what caused them, but these experts cite certain problems with all of the theories that you just read about. Here are a few of the arguments that they make. First, the idea that the sounds were caused by orca whales seems plausible at first, but is ultimately highly unlikely. It's true there were orca populations in the general areas that the Russian submarines were patrolling, but orca whales mostly live near the surface of the water. The submarines typically remained deep in the ocean and should not have been able to hear the whale sounds from near the surface. Also, the orca whales would have been detected by the Russian sonar if they were nearby. Giant squid may be a better candidate, but one critical fact speaks against the squid theory as well: Russian submarines first detected quacker sounds in the 1960s, and reports of them continued for about two decades, but the sounds disappeared entirely by the 1980s. However, as far as we know, squid have always lived in the ocean where the submarines were patrolling, and continue to live there today. If these were squid sounds, there would be no reason to suddenly start hearing them in one decade and then suddenly stop hearing them twenty years later. Third, the idea that the quackers were caused by a secret submarine from another country does not hold up. The sources of the sounds appeared to move around and change direction very quickly. Submarines cannot move or change direction that quickly. Also, all submarines make some engine noise, but no such noise accompanied the quackers. Even today, we don't have technology to build submarines that are that fast and have engines that are that silent.

Summarize the points made in the lecture, being sure to explain how they challenge the specific theories presented in the reading passage.

Do you agree or disagree with the following statement? Young people today have no influence on the important decisions that determine the future of society as a whole. Use specific reasons and examples to support your answer.