Background: Extraterrestrial Encounter
To date, humanity has not made any form of contact with extraterrestrial intelligence (ETI). But we cannot rule out the possibility that one or more ETI exist in our galaxy, or that we could detect, communicate with, or in other ways have contact with them in the future. There have been many analyses of how contact would proceed, but these tend to focus narrowly on one possible contact scenario. The purpose of this paper is to analyze the broad range of possible ETI contact scenarios in terms of whether the contact would benefit or harm humanity. Such scenario analysis helps train our minds to recognize patterns in actual outcomes, which can be valuable in the event of an encounter.

Scenarios That Would Benefit Humanity
There are several ways contact could benefit humanity. Merely detecting the existence of ETI would be beneficial because it would be such a monumental discovery—arguably the most important discovery in human history. Or, if ETI cooperate with us, then they might be of assistance to us on many of our intellectual and social challenges. Or, if they are uncooperative but we defeat them, then we gain a major moral victory and the opportunity to reverse engineer ETI technology.

Scenarios That Would Be Neutral To Humanity
There are also several ways contact could be neutral to humanity, meaning that we are indifferent to contact with ETI. If the ETI are invisible to us then they could have no impact on us. The invisibility could be intentional (they are hiding) or unintentional (they are too far away or are of a form that cannot interact with us). But they could seem invisible but covertly impact us. Another neutral scenario is if the benefits of mere detection are offset by undesirable aspects of the encounter, such as a drain on our resources or a dispute over how to respond.

Scenarios That Would Harm Humanity
There are many ways contact could harm humanity. This is because ETI are likely much stronger than humanity, which is in turn because humanity is a young civilization relative to astronomical time scales. ETI could harm us intentionally in several ways. ETI could attack and kill us, enslave us, or potentially even eat us. ETI could attack us out of selfishness or out of a more altruistic desire to protect the galaxy from us. We might be a threat to the galaxy just as we are a threat to our home planet. ETI could also harm us unintentionally. ETI might give us a biological or computer disease that our defenses cannot handle. Or, ETI might mechanically crush us while attempting some unrelated maneuver. Or, ETI might accidentally unleash some major destructive force into the galaxy such as a runaway artificial intelligence or an effect of a poorly-executed physics experiment. This major force might destroy the ETI too. Finally, ETI could demoralize humanity, if we learn that we are not special or not even particularly strong within the galaxy.