## **Study Guide**

## Angels of the Singularity Chapter 4





This episode was conceived first, even before the characters were defined. This is where the idea of two angels comes from. It's the biblical tale of Sodom and Gomorrah, made science fiction.

When Grant argues with Jackson to convince him to save the town, this is the way Abraham argued with God (!) not to destroy Sodom in Genesis 18:16-33. I've always found this scene exceedingly strange. We have an internal monologue from God, ruminating about whether to tell Abraham that he (God) is about to obliterate the city. God does tell him, but Abraham hopes that god will not destroy the righteous with the wicked. It's an ancient slippery slope argument, which Abraham draws out in smaller and smaller increments: 50, 45, 40, 30, 20, 10. "And he said, Oh let not the Lord be angry, and I will speak yet but this once: Peradventure ten shall be found there. And he said, I will not destroy it for ten's sake." (Gen. 18:33, KJV). Of course, the two angels God sends don't find ten, just Lot and his family.

The town visited by Jackson and Grant is Soda Dome, with Gem Ore adjacent. 'Nuff said. There, they are accosted by the residents, as are the angels in Genesis, but for different reasons. These poor miners are objecting to God's lack of integrity in destroying the just, the wicked and anybody else for the ore. In the Genesis story, Lot has two daughters (who jump his old bones at the end, in another bizarre twist), but in my story they are dead, their ashes stored in paint cans on an altar, with their pictures above. These pictures are details from a famous Diane Arbus photo of two retarded women at a mental institution. I'm not a big fan of photography, but this picture has stuck in my head for many years. They are, as the Devo song says, "happier than you and me."

Lot's speech is significant because it recalls the back-story from the perspective of a poor man. Throughout this series of comics, the story of what happens is retold from a number of different viewpoints. Such an event can't be captured in a single telling, because of the far-reaching and varied consequences. Finding many partial histories is much of what the characters do in the comic, and why I've been reluctant to plunk down a simple, over-arching explanation. I can't properly sum it all up.

The biblical parallels continue, as the angels blind the angry mob: "And they smote the men that were at the door of the house with blindness, both small and great: so that they wearied themselves to find the door." (Gen. 18:11). There was a military laser project in the early 1980s called the "eye popper" which would have been a blindness-inducing laser for the battlefield. Many scientists objected, seeing this as tantamount to high-tech mustard gas. I knew a guy–a real jerk, lemme tell ya–who worked on this for a time, inventing a laser that covered the whole visible spectrum so that colored goggles wouldn't save you. The army (so I heard) had a plan for our soldiers when the enemy also possessed such weapons; wear an eye patch over one eye, and when you are laser-blasted, uncover your good eye and switch the patch to the now blind eye. That's why we have an extra, right? Currently, there are devices which can quickly block a super bright flash, protecting eyes or cameras. With our soldiers wearing electronic visual head gear, the problem has probably gone away, at least for us.

Jackson's calculation of the time between holes is based on his measurement of the temperature of the oncemolten rock (observing the spectrum of the emitted infrared light) and calculation of how long it would have taken to cool, based on the rock's known physical characteristics. The rock can absorb a certain amount of energy in order to increase in temperature a certain amount, and how much energy per how much temperature is called the heat capacity. The rock also can conduct heat, and the volume of rock that would be involved in storing this energy would be related also to the thermal conductivity. Assuming that the rock he can see was in contact with rock at the melting point (also characteristic), Jackson is able to determine how long ago the rock was being mined. Of course, he has to know what kind of rock it is, and for this he knows geology. In the end, he turns out to be wrong, but there would be a lot of uncertainty in this situation, since he doesn't know each detail with enough precision, particularly the characteristics of this particular rock formation. He had to guess.

I see the taking up of the seared skeletons into the mining machine as the poor man's rapture. They finally got theirs, but couldn't enjoy it.

Jack T. Chick (Chick Publications, www.chick.com) produced a mini-comic retelling the Sodom and Gomorrah story, but from a fundamentalist perspective ("Doom Town," tract number 273). It's a screed against, well, sodomy. The bible-thumpers always ignore all the weirdness in these old stories, so it has to be taken up by artists.