villainous group, the opposite of their virtuous elven counterparts. In the Figure 1 phylogeny, all the dark elven taxa formed a monophyletic clade. While all elves grouped together, the remaining, non-dark elven taxa did not form a monophyletic clade. Interestingly, the Protoss_OG taxon, though originally intended as an outgroup and although not a race of elves, claded within that group. Another Tolkien-derived fictional race that grouped together were the dwarves. Dwarves from across all IPs formed a paraphyletic clade, and this clade was sister to the elven clade in the tree topology. The elf-dwarf clade came out as sister to the polyphyletic humans. All human taxa except one (Humans_40K) nested within a clade sister to the elves and dwarves; the Humans_40K taxon from the *Warhammer 40K* universe ended up being nested within the dwarven clade, sister to the Squats (the dwarves of the same universe). The orc taxa, like the dwarves, were also paraphyletic, although spread out on the tree topology rather than forming an inclusive clade.

Figure 2 shows the ML tree that resulted when all four intended outgroup taxa (Protoss_OG, Zerg_OG, Tyranids_OG and Xenomorphs_OG) were designated as outgroups in the tree search and bootstrap analyses. With respect to the human, dwarven and elven taxa, the tree topology was the same as resulted from the previous analysis described above; dark elves and elves as a whole were monophyletic and sister to the paraphyletic dwarves, and these two clades together were sister to the polyphyletic humans. Where additionally designating the Protoss_OG taxon as an outgroup changed the tree topology (at least at a glance) as compared to the previous analysis was in the placement of the orcish taxa; rather than clading with the other three sets of Tolkien-derived taxa, the orc taxa claded with the other three outgroup taxa (Zerg_OG, Tyranids_OG and Xenomorphs_OG) and were collectively sister to the former. Even though the Protoss_OG taxon was assigned as an outgroup here, it still ended up being nested within the elven clade as it was in the previous analysis; since the outgroups did not form a monophyletic group, *RaxML* was unable to root the tree based on the outgroups. Given that the tree in Figure 2 is unrooted, the relationships suggested by the tree topology are actually the same as the tree shown in Figure 1.

What *did* change the relationships depicted by the tree topology resulting from the concatenated dataset was removing the Zerg_OG, Tyranids_OG and Xenomorphs_OG taxa from the alignment and designating the Protoss_OG taxon as the sole outgroup in the analysis. Figure 3 shows the resulting tree; the similarities in character states between the Protoss_OG taxon and the elven taxa caused the monophyly of the latter to be broken up, and dragged the previous elven clade out of its position as sister to the dwarves. In this topology, the elves are paraphyletic and basal to both the dwarves and humans. The change in outgroup also shifted the placement of the orcs; rather than being basal as in the previous trees, the orcs came out here as more derived, and sister to the humans.

Bootstrap support values across all three of the trees described above were overall low except in a few cases. The relationships suggested among the orc taxa were well supported in these analyses, with nodes being supported between 70 and 100 percent of the time across all bootstrap replicates. In the two instances they were utilized, the relationships among the Zerg_OG, Tyranids_OG and