Phylogenetic assessment of the evolution of the fictional races of Tolkien across multiple fictional universes

Jermaine Mahguib

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The high fantasy races of J. R. R. Tolkien, as he described them, became the basis for races that inhabit numerous universes in modern fiction. Permutations of Tolkien’s elves, dwarves and orcs are found across a broad range of written literature and published video game series, each adding new features, traits, behavioral ranges and story roles, while retaining others from the original descriptions. For example, in Tolkien’s fictional works, the elves fill the archetypal role of the “old man,” the ancient first race to inhabit the world. In the contemporary timelines of Tolkien, the elves are a race whose time of prominence has come and gone, and they serve as a fount of wisdom on matters of history and ancient arcana, and are often thrust into the role of providing some form of guidance for younger races. This archetypal role is often maintained across derivatives of the race in fictional universes.

In this study, I propose mapping out a suite of character states that describe the core races of several fictional universes, and creating a dataset for phylogenetic analysis to assess how these races have evolved from Tolkien’s original incarnations. The character states will be categorized into three groups: physiological traits, behavioral traits, and archetypal traits. For example, comparative physical strength of typical members of a given race would be categorized as a physiological trait and have a range of discreet character states such as ‘weak,’ ‘moderate’ and ‘strong.’ Another example of a character would be aggression level, which would be categorized under behavioral traits and have the states ‘reserved,’ ‘provoked’ and ‘aggressive.’ Every character state will be encoded using a numerical value, and a string of character states will be generated for each character category, for each race, from each of six test universes, as well as races from two additional universes that will be used as outgroups. All character states in a given category, for a given race, will be determined relative to other members of the same universe; cross-universe comparisons will not be considered when determining character states.

The archetypal traits category will encompass characters that describe how a race fits into a particular universe in terms of the stories that are told within them. For example, in Tolkien’s stories the orcs fill the role of an irredeemably evil race of vile killers who serve as a persistent villainous army that threatens the noble races of the world. In another universe, the Warcraft universe, the orcs are initially presented as a race occupying a similarly villainous story role, but are later revealed to actually be a noble race themselves who are only pitted against the protagonist races circumstantially. These adjustments to the original archetypes are part of the evolution of these races across fiction, and should be included in the proposed analysis.

Once character-state matrices are constructed and sequences are extracted and aligned, the data will be used in a set of maximum likelihood analyses using a Jukes-Cantor model of evolution