

Hobbits on the Map of Britain

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Abstract

Geographic distributions of names can be relatively static over many generations. This paper applies a mapping of English names to places in Great Britain to extract implicit correspondences between the names of hobbit families and their roles in *The Lord of the Rings*. J.R.R. Tolkien is found to have used family names that predominate near his childhood home in the West Midlands to connote characters close to Bilbo and Frodo, names from other parts of Britain to indicate relationships that are not so congenial, and names that do not occur widely in Britain to designate characters who are exotic or strange. The mapping is applied to the story of the Gamgee family, which exposes a story hidden in the Appendices.

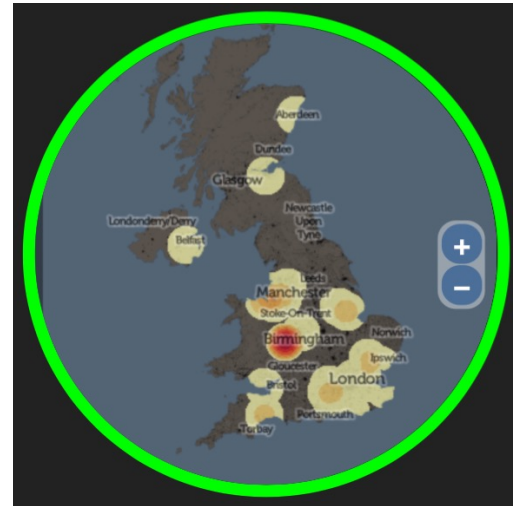
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¹ The author's affiliation with The MITRE Corporation is provided for identification purposes only, and is not intended to convey or imply MITRE's concurrence with, or support for, the positions, opinions or viewpoints expressed by the author.

Introduction

Hobbits have last names. Their elaborate family trees, going back centuries, are an important part of their culture. This makes them modern by Middle-earth standards; English people didn't usually have last names until the 13th Century. Among the hobbits, great families, at least, seem to have character traits that they pass on genetically from generation to generation.

Like hobbits, English people rarely move around so names are strongly associated with places. In England and all over Europe, geographers have done extensive work on matching names with places. Oliver O'Brien has put their results on a public server² that lets anyone map a family name in the United Kingdom. According to this tool the distribution of families named "Baggins" is centered near Birmingham, almost exactly over top of J.R.R. Tolkien's boyhood home. This is not an accident. Tolkien saw his legendarium as the prehistory of England. As Tolkien wrote in a letter, "[hobbit] family names remain for the most part as well known and justly respected in this island as they were in Hobbiton and Bywater."³ Respect is difficult to quantify, so it is not a good subject for numerical analysis. In another letter, though, Tolkien said, "I have, I suppose, constructed an imaginary time, but kept my feet on my own mother-earth for place."⁴ Geography is much more quantitative, so it can be applied scientifically. This work will take the comment in that letter literally, and see what we can learn about Middle Earth by it.



The hypothesis here is that names associated with the West Midlands region of England (near Birmingham) were given to hobbits who were close to Bilbo and Frodo. Less-congenial hobbits carry names from further afield. When Tolkien wished to convey an exotic or fantastic character, he used a name that is not common in England.

Method

The analysis to test the hypothesis has three parts. First is the geography, which takes place in the primary world. Second is the classification of hobbits according to their relationship to the Bagginses of Hobbiton, which takes place in Tolkien's text. Third is to estimate each family's importance so the relationship between geography and classification can be put in the context of the story, which takes place in a spreadsheet.

Geographical foundation

Names in Europe are surprisingly stable, geographically. Even after tremendous advances in transportation and two waves of globalization, it is still possible to "identify combinations of location-specific surnames that date back 700 or more years."⁵ Databases of family names and their locations in Europe have been used by sociologists to track population movements, geneticists to

² All map graphics are computed by O'Brien, Oliver, *Suprageography*, <http://oobrien.com/2016/02/named/>.

³ *Letters*, #25

⁴ *Letters*, #211.

⁵ Paul A. Longley, James A. Cheshire, Pablo Mateos, "Creating a regional geography of Britain through the spatial analysis of surnames", *Geoforum* **42**,4, July 2011, pp. 506-516.

extend the reach of their work back before the discovery of DNA, and economists studying mobility between the rich and the poor. The most widely cited research in this area has been done by James Cheshire and his collaborators. The first result to take away from Prof. Cheshire's results is that their computed division⁶ of England into regions of common surnames shows a remarkable similarity to the political division of England into administrative regions.⁷

The West Midlands is the area of most interest for the study of hobbits. In Figure 2, note that the region is divided into a purely-English area on the east and an area that is heavily influenced by Welsh on the west.⁸

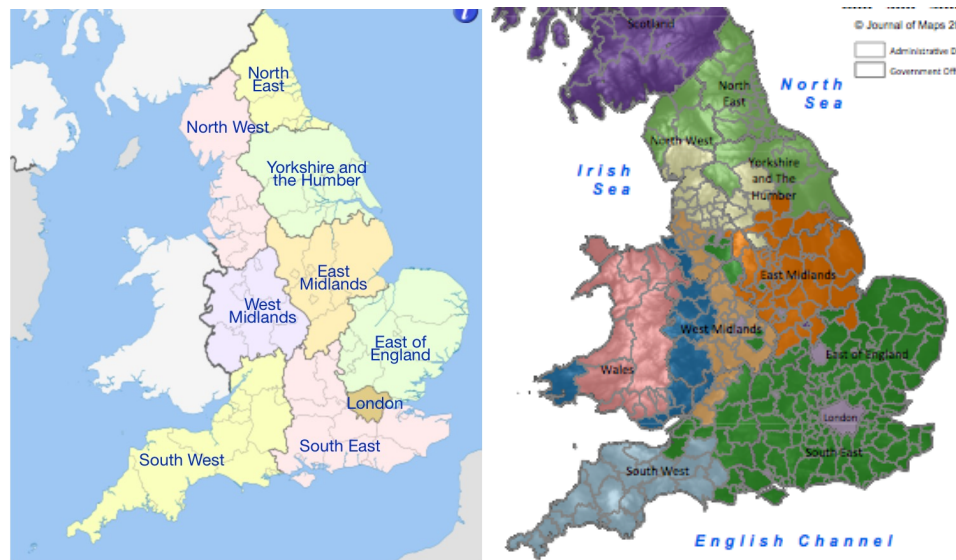


Figure 2. Administrative Regions of England (l), surname map (r)

Classifications of families

Pace the majority of critics who have written about *The Lord of the Rings*, its characters are not simply good or bad. Such a simple classification is found to be untenable almost immediately, when one attempts to place Lobelia Sackville-Baggins (*née* Bracegirdle). Simply calling her and her family evil is too simple – attacking a six-foot ruffian with just an umbrella is a heroic, self-sacrificing act of the kind that evil characters do not do in *The Lord of the Rings*.

A better classification has three categories. In real life, as in Tolkien, some people you keep close to you. They could be family, or they could be just friends. The Tooks and the Bagginses, despite their considerable differences in temperament, are quite close. This shows up on the map as surely as it does in the text. (Figure 3) The first classification will be called “close”.

⁶ Cheshire, James A., Paul A. Longley, and Alex D. Singleton. “The surname regions of Great Britain”. *Journal of Maps* **6.1**, pp. 401-409 (2010).

⁷ Image source: http://en.wikipedia.org/wiki/Regions_of_England

⁸ For Tolkien’s affection for Welsh, see *Letters* #163. Note also that the West Midlands is the only Region with no seacoast, and that “most hobbits regarded even small boats with deep misgivings.” *Prologue*.

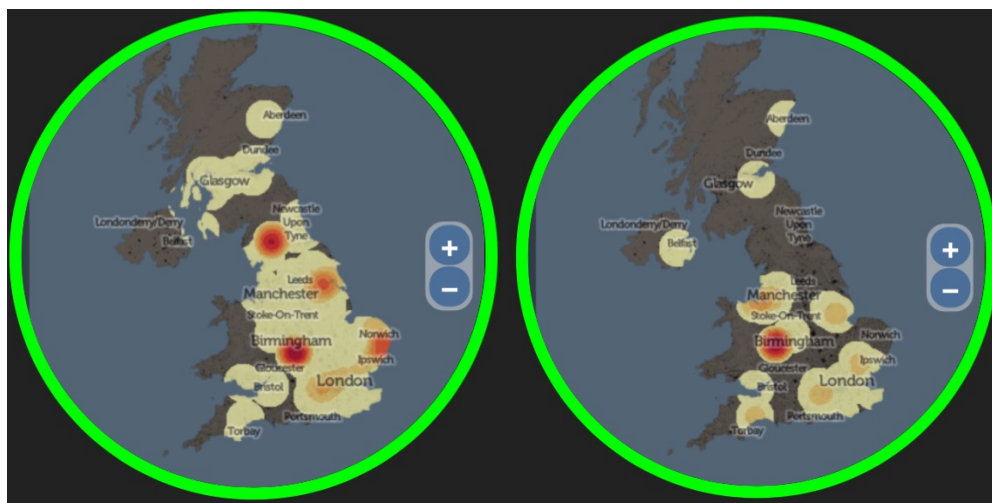


Figure 3. Took (left) and Baggins (right)

Other people are neighbors who frequently seem to act in a way that interferes with others getting on with their lives. The members of this second group are not bad, exactly, but it's good practice to keep them at a distance, so this group will be designated "arms-length". A hobbit one keeps at arm's length might be an unwisely-chosen in-law or a cousin who borrows books and doesn't return them. Figure 4 shows how a Sackville-Baggins, rather distant to start with, can be led further from the fold by marriage to a Bracegirdle.

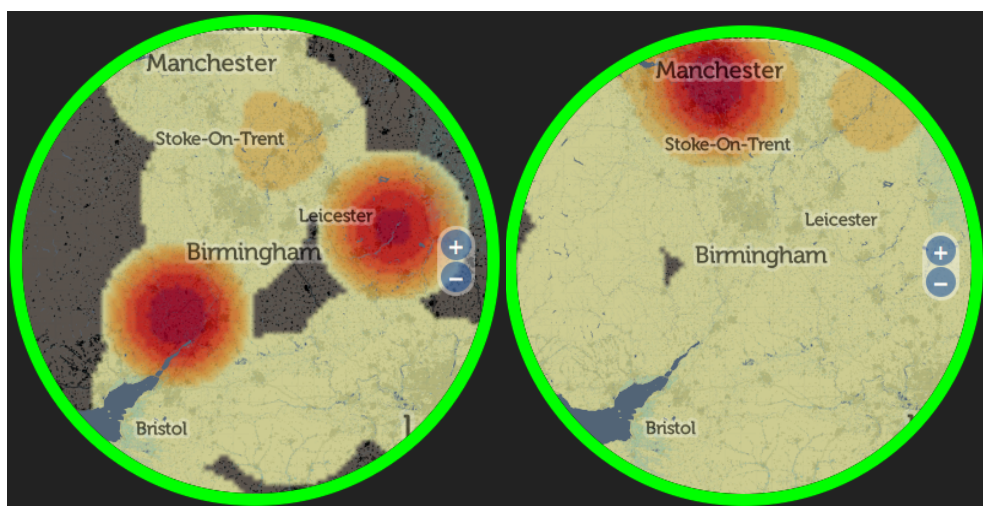


Figure 4. Distribution of the names Sackville (l) and Bracegirdle (r)

Not all hobbits live in Hobbiton, of course. The last classification is the liminal families, who are perceived as being a bit strange and often uncanny. "They still had many peculiar names and strange words not found elsewhere," the narrator says about the Brandybucks.⁹ Likewise the Hornblowers, from off in the Southfarthing, who "had hardly ever been in Hobbiton before".¹⁰ The extreme case is the hobbits of Bree.

⁹ *LotR*, Prologue

¹⁰ *ibid.*, I, i.

Gandalf gives Frodo the name “Underhill” to use in Bree because knows that no one who hears it will think of the bearer as living anywhere near the Shire.¹¹ Figure 5 shows to what Gandalf is referring. The Underhill family is far north, on the Scottish border, but a scattering of members can be found almost anywhere in England.

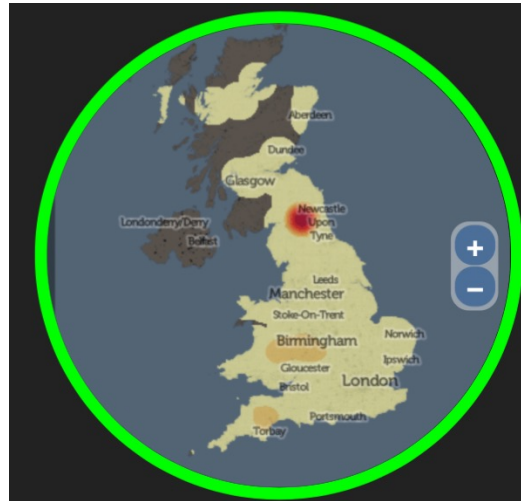


Figure 5. Distribution of the name "Underhill"

Results

The examples in Figures 3, 4, and 5 are cases where the hypothesis works. Not all names fall perfectly into their assigned categories, though. As Tolkien says in the Prologue, “By the time of this history these names were no longer found only in their proper folklands.” We can expect that there will be some leakage across boundaries where the author has some artistic purpose. If the hypothesis were unequivocally satisfied, a graph of the families in each geographic group and classification would look like Figure 6. Each group, “close”, “arms-length”, and “liminal”, would show a peak in the appropriate geographic region, “Birmingham”, “England”, and “Middle-Earth”. Each group would have a low number of families in the areas that are not associated with that relation to the Bagginses.

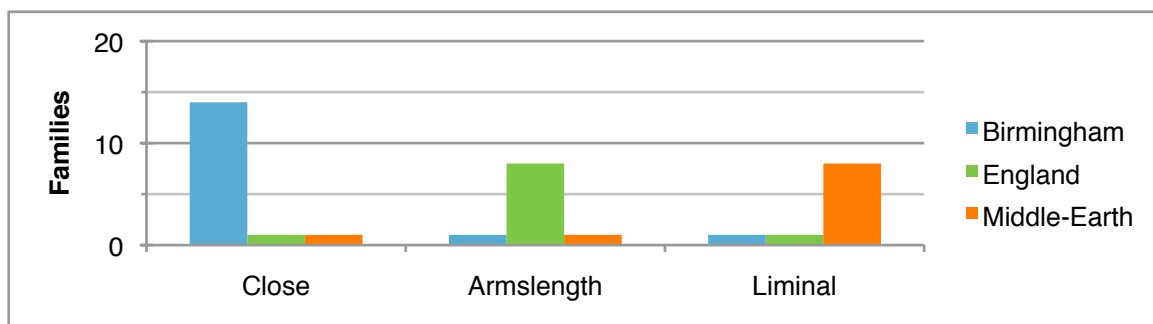


Figure 6. Hypothetical distributions of family names among relational categories

¹¹ *ibid.*, I ii.

Twenty-eight families are mentioned in *The Lord of the Rings*. Half are close to the Bagginses, five are at arm's length, and nine are liminal. As can be seen in Figure 7, names from Birmingham and its outskirts are mostly given to close relations. There are many names from outside the West Midlands in the "close" category as well, which is less congenial to the hypothesis. Families to be kept at arm's length are equally likely to have any kind of name. Liminal families mostly have names that appear only in Middle-Earth (i.e., not in significant numbers in England).

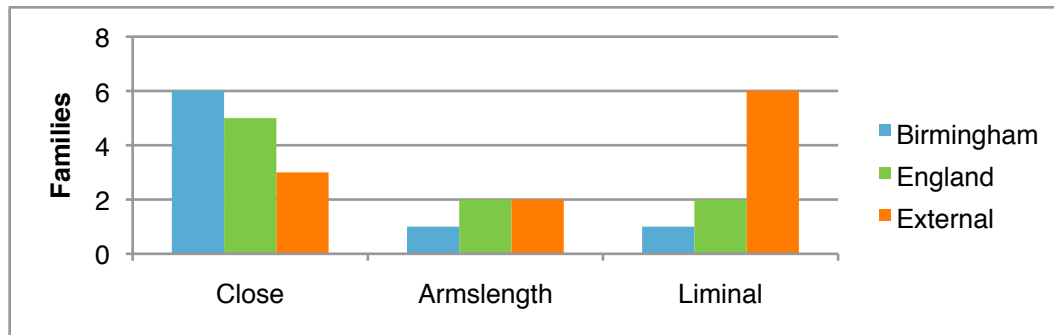


Figure 7. Family names in each geographic group, by relational category

Not all hobbit families are of equal importance to the story, however. The four members of the Fellowship of the Ring are more important than (for example) the Sandheaver family, which is mentioned only in passing as a name that didn't sound strange.¹² A better way to investigate the correlation between names and geography will need to account for the role of the family in the story, since even an author as thorough as Tolkien spends more time thinking about the more important characters.

A numerical definition of importance to a story is not established in the scholarly literature, but importance has simple mathematical properties:

1. The importance of a character who is mentioned zero times is undefined.
2. A character mentioned only once has the least importance.
3. The difference in importance between being mentioned on one page and two is greater than the difference between being mentioned on 10 pages and 11, and roughly equal to the difference between being mentioned on 10 pages and 20.

These are the properties of a logarithmic function. For these purposes, the importance will be the logarithm to base 2 of the number of pages¹³ on which a family is mentioned in the story. The importance of the Baggins family is 10. Tookes, Brandybucks, and Gamgees are all about 9. The importance of the Sackville-Bagginses is 5.9, the Maggots is 3.5, and Sandheavers is 0.¹⁴

Giving each family a weight according to its importance, the classification is shown in Figure 7. Families close to the Bagginses are dominated by names from Birmingham. Families to be kept at arm's length peak in the areas of England away from Birmingham. Liminal figures are strongly

¹² *LotR*, I, ix.

¹³ Page counts are from the index of *The Lord of the Rings*, single-volume edition, New York: Houghton-Mifflin-Harcourt, 2002.

¹⁴ Names mentioned only in the genealogical charts in Appendix C are ignored.

weighted towards names that appear only in Middle-Earth, not in England. The matrix is diagonally dominant. That is, families that do not adhere to the hypothesized pattern are of less importance to the story than those that do.

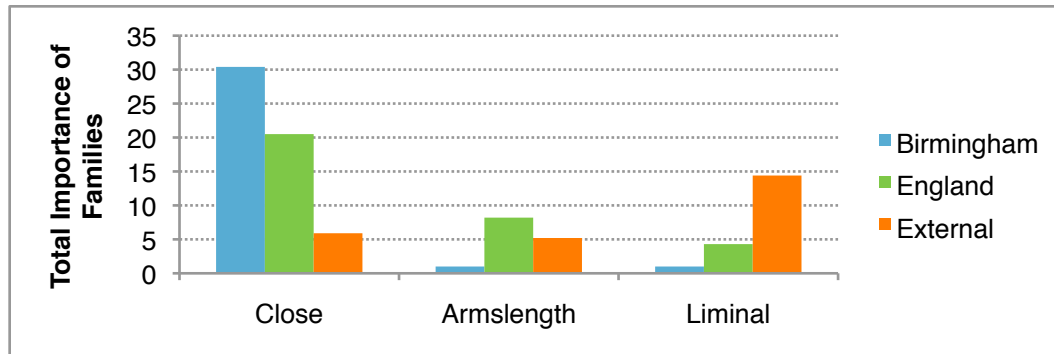


Figure 7. Importance of families in each relational group, by geography

So the hypothesis is broadly supported. The difference between art and science, though, is that breaking a scientific law is impossible. In art, creating a rule and then breaking it is a way to direct attention. A character who does not fit the hypothesis is worth examining.

Application: the Problem of Sam Gamgee

The most conspicuous name to break the pattern is that of Sam Gamgee. As Figure 8 shows, the Gamgees are from the East (as are the Goodchilds, Sam’s mother’s family). A name like theirs ought to denote a character to be held at arm’s length.

Appendix F contains a lengthy discourse on the subject of how “Gamgee” is not really a family name, but an epithet derived from the town of Gamwich whither their ancestors had decamped several generations back. Why does that require more than half a page of explanation? Because names are important in Tolkien’s fiction. Nicknames are less important, more mutable, and can be assigned much more flexibly.¹⁵

The Letters explain the disconnection in real-world terms.¹⁶ The name “Gamgee” pre-dates the book; it is a punning name to amuse children. When the audience for the story (primarily the young C.J.R. Tolkien) would not permit J.R.R. Tolkien to change it for publication, some explanation of the inconsistency was evidently required.

In any case, the problem was resolved in Appendix C. Upon his accession to Mayor, Samwise changed his family name to “Gardner”. That name has a much closer association with the West Midlands. The primary peak is just north of the regional boundary, but the secondary peak in the density of the name overlaps with the Bagginses in Figure 1. Evidently three generations of residence plus saving the world from evil is almost sufficient to get one accepted into Hobbiton society. So the mystery of the lengthy treatment in the Appendices is explained by a geographic visualization. (Figure 8) Samwise’s rise in Hobbiton circles is matched by a reduction of his name’s distance from Birmingham.

¹⁵ For example, Aragorn in *The Lord of the Rings*, or Turin Turambar in *The Silmarillion*.

¹⁶ *Letters* #72, #76, #144, etc.

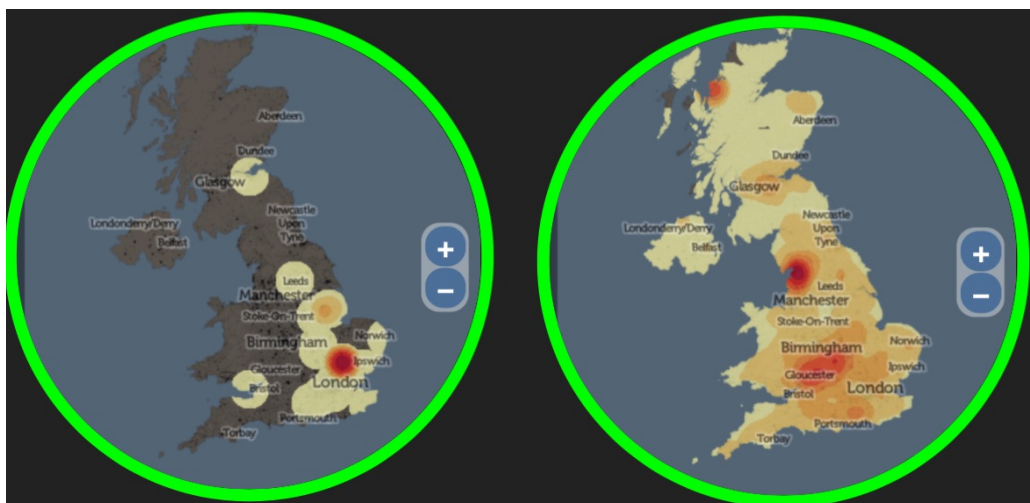


Figure 8. Distribution of the names Gamgee (l) and Gardner(r)

Discussion

This was all done graphically, based on the public web interface to O'Brien's database. Quantitative geographers would have constructed relationships between the distance at which each family was removed from the Bagginses and some statistical measure of the weighted distance of the name from Birmingham, but qualitative analysis is sufficient to confirm the hypothesis.

The second-largest group in the cross-tabulation is families that are close to the Bagginses, but whose names are not from the West Midlands. In particular, the phrase “Grubbs, and Chubbs, and Burrowses” appears to have been euphonious enough to justify breaking the pattern.

The skew of liminal figures towards names that do not appear in England is mostly due to the Brandybucks. They were assigned to the liminal category because of the suspicion that the working-class hobbits of Hobbiton have toward them¹⁷, and because the narrator states¹⁸ that “They still had many peculiar names and strange words not found elsewhere.” There are no Brandybucks in the English database, though Buckland does appear on maps of England, just outside of Dover.

The arms-length category is only moderately peaked would be strongly peaked in England outside of the West Midlands, were it not for Sandyman the miller and his son. Their name does not appear in the database. None of these appears to damage the validity of the hypothesis.

Conclusion

The fact that the problem of the Gamgees is resolved in the Appendices provides an indication that the geographic distribution of names was in J.R.R. Tolkien's mind as he wrote *The Lord of the Rings*. This work applied an open-access geographic information system that maps English family names to places in Great Britain to explicate correspondences between the names of hobbit families and their roles in *The Lord of the Rings*. We found that J.R.R. Tolkien used family names that predominate near his childhood home in the West Midlands to connote characters close to Bilbo and Frodo, names from other parts of Britain for relationships involving interactions that are frequent but not so congenial, and names that do not occur widely in Britain for hobbits who are seen from Bag End as exotic or strange.

¹⁷ *LotR*, I.ii.

¹⁸ *LotR*, Prologue, i.

As the chronological and cultural distance between the Inklings and their readers grows, readers will not have direct experience of the world from which the writers drew in their sub creative efforts. Information systems designed to describe our primary world may play a role in preserving the nuances and connotations of choices made by the writers as they constructed their sub-created worlds.

Tolkien wrote in "On Fairy-Stories" about "the inherent weakness of the analytic (or 'scientific') method: it finds out much about things that occur in stories, but little or nothing about their effect in any given story."¹⁹ Perhaps this exercise has shown one way that the scientific community has used the intervening 75 years of effort to step up to that challenge.

¹⁹ "On Fairy-Stories", footnote 15.