

# Empathic Engagement and Aesthetic Appreciation Between Readers' Ethnicity and Narratives' Literary Prestige

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## Abstract

Scholars of postcolonial studies have highlighted the role played by identity features in both the production and the reception of literary works. In this paper, we apply computational methods to a corpus of reviews of South-African post-colonial novels, downloaded from the Goodreads platform, in order to assess the influence of sociocultural and intersectional factors on the level of appreciation and identification potential of narratives. In particular, we investigate the effect, on the one hand, of the reader's ethnicity and, on the other, of the work's literary prestige on the appreciation and the empathic transportation elicited by narratives in the reader. To operationalize our hypotheses, we collected information on the reviewers' country of provenance (self-declared by Goodreads users) and on the book's critical appreciation (via either the award of or the nomination for a literary prize). Such information was compared with: (a) Goodreads star rating scores, indicative of success in the online reading community; (b) usage of empathy lexicon (identified via the Linguistic Inquiry and Word Count tool – in short LIWC), indicative of the reader's identification in the narrative. Results indicate that readers typically empathize more with works that reflect themes from their own country and tend to award them with slightly higher ratings. Furthermore, we found that critically appreciated books, though collecting higher ratings, elicit a smaller empathic response in the reader than those that did not win or

were not nominated for any literary prize.

Keywords: book reviews; Southern Africa; post-colonialism; empathy; literary prestige

## 1 Introduction

Literature has been and still is a key component of both colonial and post-colonial discourses, since they both hinge on the theme of identity and, as Thiong'o puts it, "language is central to a people's definition of themselves" (Thiong'o 2005, p. 4). It has been said, for instance, that the imposition of a western canon to colonized countries has for a long time prevented the development of local voices. By contrast, contemporary postcolonial literature, whether by experimenting with hybrid forms (Boehmer 2005) or by promoting self-determination (Fanon 1967), opens itself to an exploration of territorial identities that can finally go beyond the mimicry (Ashcroft et al. 2000) of western conventions.

Given their ability to foreground the sociocultural context in which literature is consumed (Machor & Goldstein 2000), reception studies can offer a suited paradigm for the investigation of the processes of identification elicited by post-colonial literature in its readers. In particular, the recently-emerging phenomenon of digital social reading (Cordón-García et al. 2013, Pianzola 2021) constitutes the ideal playground where to perform such investigations using a DH toolkit (Rebora et al. 2021), thanks to the millions of reader responses collected on platforms like Goodreads and Wattpad, written by users from all over the world.

By stressing the role played in literary reading by intersectional factors, postcolonialism makes a claim that, though intuitive, is all but uncontroversial. Indeed, the relationship between literature and its readers is a complex phenomenon, and many would still be recalcitrant in accepting its 'reduction' to matters of, say, ethnicity or gender. For instance, supporters of a universalist view, as discussed by Larson (1973) and Ashcroft et al. (1989), would argue that literature deals with a universal essence of humankind that transcends such categoriza-



tions.

Here, we set out to empirically assess these problems, by isolating and studying the roles played in eliciting readers' identification by: a) convergence of readers' and writers' ethnicity; b) literary quality of the work itself. If the essentialist argument was to be true, we should expect factor **a** to play no role and factor **b** to be the only element truly affecting readers' identification dynamics. Conversely, if factor **a** would be found to indeed play a significant role, we would agree with the postcolonial take.

We conceptualized readers' identification with narratives in terms of transportation, described by Gerrig (1993) as the process through which we get 'sucked into' the story and experience it as if we were actually living it. The emotional aspect of this phenomenon has been amply discussed by Oatley (1999), while Bal & Veltkamp (2013) demonstrated its effect on readers' empathy. Building on this, we decided to take readers' empathic engagement with the text as a proxy for their identification with the narratives, and hypothesized (**H1**) that readers would show a greater empathic response to authors coming from their own area. This hypothesis is supported by research in the field of neuropsychology (Beeney et al. 2011, Cikara et al. 2011, Mathur et al. 2012) showing that the neural correlates of empathy are activated to a lesser degree by the misfortunes of individuals of a different ethnicity than by those of individuals that belong to the same. Conversely, if literature were indeed above race-dynamics, dealing with some universal essence of man, we should expect (**H2**) readers' empathetic response to be dependent solely on the quality of what they read – a concept that we operationalized by splitting our corpus between works that had won a literary prize and works that had not.

On a more explorative note, we decided to also take into account readers' aesthetic appreciation of the books, as expressed through the star ratings they assigned them. In a study aimed at mapping the linguistic space of aesthetic judgement, Knoop et al. (2016) show that terms referring to readers' transportation – like 'suspenseful', or 'thrilling' – consti-

tute just one of the many dimensions the judgement of literature spans across. Thus, being aesthetic appreciation a more general phenomenon than transportation, we expected these star-ratings to reflect just in part the trends of our empathic response measure, and aimed at receiving from them some additional insights about the response of the readers to the texts in our corpus.

To summarize, the two opposing hypotheses that we explored in our work were:

- That readers would empathize more with the content of a book when this is related to their country of origin (**H1**);
- That readers' empathic engagement with the text would depend solely on the literary quality of the text itself (**H2**).

Furthermore, for reasons that will be better explained in paragraph 2.3, for each one of the aforementioned, we formulated a sub-hypothesis, namely:

- That differences in the measure of empathic engagement across reviewers were not the effect of the specificities of Southern African use of the English language (**H1-bis**);
- That criteria underlying the awarding of a literary prize could differ depending on the cultural context behind the prize itself (e.g., prizes awarded by African or European juries), and possibly even interfere with the main effect that we set out to investigate (**H2-bis**).

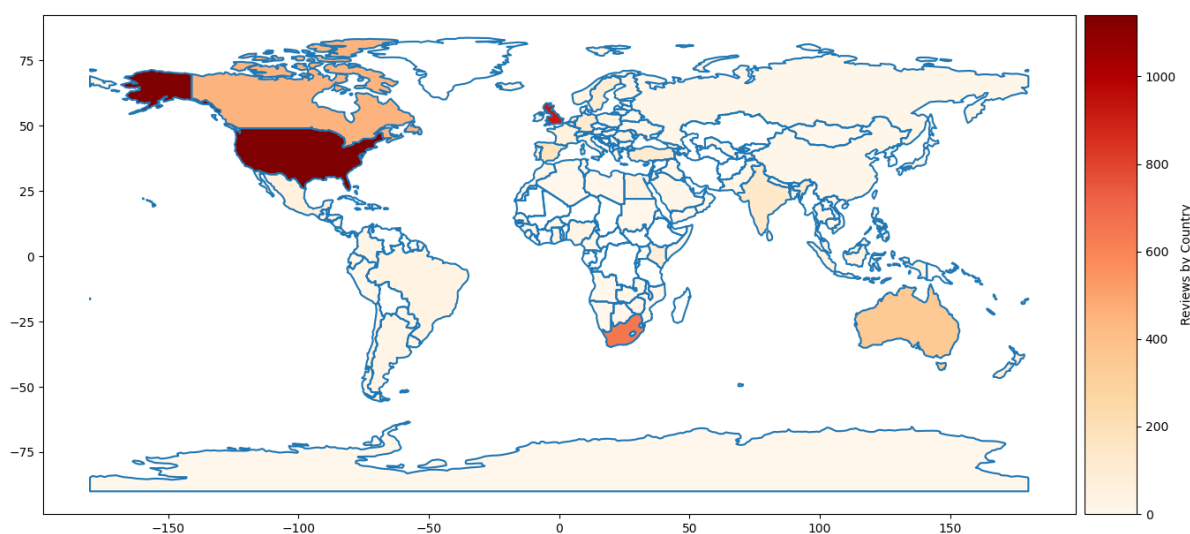
## 2 Methods

### 2.1 Data

The books that formed our corpus were selected from the Goodreads platform according to the following criteria:

- They had to be tagged, by more than two people, with a tag relating them to the region of Southern Africa. In particular, works in our corpus are tagged by at least one of the following tags: "south-african", "south-africa", "botswana", "zimbabwe".





*Figure 1: Density of reviewers per country*

- They had to be tagged, by more than two people, with a tag relating them to postcolonialism (we considered the tags “post-colonial”, “post-colonialism”, “postcolonial-colonial”, “colonialism”) or had been voted by more than two people in one of the following lists: Books About Colonialism [1], Best Postcolonial Literature [2], and Colonial and Post-colonial Literature [3].

This way we formed a corpus of 48 titles, by 27 authors [4].

We gathered information about the prizes that each book won or was nominated for, as they were reported on the Goodreads platform. We decided to further divide the category of “critically acclaimed” books into a subcategory of works that won (or – and let the clarification here be valid for the rest of the paper – were nominated for) international prizes and books that won prizes awarded by African juries (for instance the M-Net Literary Award) or that were specifically dedicated to works coming from the African continent (for instance the Noma Award for Publishing in Africa). As sociological research shows (Bourdieu 2010, Ayman 2013), our idea of literariness, hence our concept of

what distinguishes bad and good literature, is dependent on the sociocultural context in which we are situated, and can thus change if we move to a different one. Building on these premises, we deemed it useful to separate the two classes of prizes, in order to account for possible cultural differences in the criteria of their awarding.

For each one of the selected books we gathered, with a web-scraping python script, as many reviews as possible and saved them alongside with the date of publication, the ID of the reviewer, the rating assigned to the book and the reviewer’s country of provenance. This last piece of information is not declared by all Goodreads’ users, and also, when it is declared, it does not follow a pre-defined, specific format. It follows that a good deal (around 60%) of the original reviews had to be discarded due to the impossibility to gather information about their provenance.

This way, we formed a dataset composed of 5993 reviews, written by 3749 different subjects in a timespan ranging from 2007 to 2023. Reviewers come from 124 different countries, with an average of 48 reviewers per country. See Figure 1 for an overview. Since Goodreads is a predominantly anglophone

platform, the distribution of reviewers is heavily skewed in favor of English speaking countries (United States, United Kingdom, Canada, Australia and South Africa), which together account for 59% of the reviews (3507).

Many scholars, in the field of postcolonial studies, have highlighted certain traits shared by populations of colonized countries (Fanon 1967, Memmi 2003). This ‘colonized identity’ could indeed play a role in readers’ engagement with narratives, that would confound the effect of ethnicity in which lies our interest. For this reason, we decided to divide our dataset between reviewers coming from Southern Africa (n. 672, 11.20% of the total) and reviewers coming from other non-colonized countries (n. 4517, 75.39% of the total), discarding those coming from ex-colonies outside of Southern Africa (n. 804, 13.41% of the total). From now on, references to the corpus will regard only the 5189 reviews written by reviewers from southern Africa and by other, non-colonized countries.

Last, for what concerns ratings, Goodreads allows reviewers to rate books with a star-system ranging from 1 to 5 stars. In our corpus, the mean score assigned to a book is 3.79, with a standard deviation of 1.08, while the median is 4.

## 2.2 Empathic Transportation Scores

It is by now widely accepted that certain psychological constructs are reflected in our use of language. To quote Pennebaker, “the words people use are diagnostic of their mental, social, and even physical state” (Pennebaker et al. 2003, p. 548). It is even possible to *measure* the predictive power held by different aspects of our linguistic style with regards to the desired psychological state. Yaden et al. (2023) worked with a sample of almost three thousand subjects who had previously filled out a questionnaire that assigned them a specific empathy score, and who gave them access to their Facebook posts. They run a linear regression model with empathy scores as the target variable and the frequencies (in the posts

of each participant) of words pertaining to different LIWC categories as the predictor. By doing so, they isolated the 10 LIWC categories that have the highest correlation with empathy. In our study, we therefore decided to use these 10 categories as predictors of empathy.

Yaden et al. (2023) focused on what is called trait-empathy (i.e. disposition for empathy as a static individual feature), while our research question concerns empathy in a specific setting (state-empathy), namely the reading of a book. Nonetheless, it is not unreasonable to believe that the linguistic style of empathy as a trait would also characterize its situational counterpart. Very simply, our assumption was that the greater the empathetic response elicited by the context in a subject, the more the linguistic style of the latter would resemble the one employed by highly empathetic individuals. Furthermore, since we implemented a between-subjects design, we expected individual differences (variation in terms of trait-empathy) to average themselves out, and the eventual difference in the empathy scores of, say, Southern African and foreign readers to reflect a difference in terms of empathic engagement with the text.

For these reasons, we computed [5] for each review an empathy-score with a weighted sum of the frequencies of each one of the 10 LIWC categories, multiplied by the  $\beta$  coefficient that in the study of Yaden et al. (2023) quantified the strength of the correlation between empathy and the given category (all the coefficients can be found in Figure 2).

In our dataset, empathy scores range from 0 to 5.4,

Category	Words	Empathy	
		$\beta$	95% CI
Ppron	I, my, you, me, your	.18***	[0.14, 0.21]
Affect	Love, good, happy, :, great	.17***	[0.13, 0.20]
I	I, my, me, i'm in	.17***	[0.13, 0.20]
Pronoun	I, my, you, it, this	.15***	[0.12, 0.19]
Posemo	Love, good, happy, :, great	.14***	[0.10, 0.18]
Sad	Miss, lost, sad, sorry, alone	.13***	[0.09, 0.16]
Focus present	Is, have, be, are, get	.12***	[0.09, 0.16]
Adverb	So, just, now, when, about	.11***	[0.08, 0.15]
Focus future	Will, going, then, hope, gonna	.11***	[0.07, 0.15]
Cogproc	All, not, but, if, or	.11***	[0.07, 0.14]

Figure 2: LIWC categories most highly correlated with empathy from Yaden et al. (2023)



with a mean of 0.64, a median of 0.663 and a standard deviation of 0.38.

### 2.3 Statistical Analysis

First of all, we tested normality for both ratings and empathy scores, using the Shapiro-Wilk test. Since both variables revealed themselves to be non-normal ( $p$ -value  $< 0.001$ ), we proceeded with non-parametric tests. To estimate any possible interaction between the two variables, we also computed Spearman's correlation coefficients.

To test **H<sub>1</sub>**, we ran two Mann-Whitney tests with reviewers' ethnicity (Southern Africans vs. foreigners) as grouping variables and empathy scores and ratings as the target variables. Effect sizes were calculated by computing point biserial correlation coefficients.

Since we measured empathic engagement through language, and grouped our participants based on ethnicity, there was the possibility that the effect we detected was actually ascribable to language-related factors stemming from national origin. To disprove this sub-hypothesis (presented above as **H<sub>1-bis</sub>**), we first of all performed a qualitative analysis of the LIWC most distinguishing features, to ascertain to what extent differences were caused by the usage of function words, which could be more dependent on group preferences and identity factors – but notice, still, how also psychological traits can be identified via their usage, cf. Chung & Pennebaker (2007). In addition to this, after having verified if any statistically significant difference emerged in favor of reviews written by Southern Africans or foreigners, we tried to identify a subgroup of authors for whom such a result could be reversed. The very existence of this grouping factor (i.e. authors of novels that stimulate an empathic reaction opposite to the one registered for the entire sample) would act as a strong argument against the possibility that the distinguishing features were inherent to the ethnic groups themselves.

To assess the effect of the works' literary prestige (**H<sub>2</sub>**), we ran another Mann-Whitney test, dividing

the reviews based on whether the book had or had not won a prize and keeping empathy scores and ratings as targets. In this case too we defined a sub-hypothesis (**H<sub>2-bis</sub>**), derived from the fine-grained categorization of our data, which allowed examining differences between Africa-specific and international prizes. To check for a possible interaction between reviewers' ethnicity and ethnic roots of works' prestige, we run two ANOVAs with empathy scores and ratings as the target, using as grouping variables the information on reviewer's ethnicity (Southern Africans vs. foreigners) and award country (Africa-specific vs. International vs. no prize).

## 3 Results

The distribution of empathy scores revealed itself to be right-skewed (skewness = 1.57) while the one of ratings was left-skewed (skewness = -0.73). A statistically significant, but negligible in magnitude correlation was found between the two variables (Spearman's  $r = 0.03$ ,  $p = 0.005$ ).

With reference to **H<sub>1</sub>**, a significant difference was found between the empathy scores of Southern African reviewers and those of foreign ones ( $u = 1146510.5$ ,  $p < 0.001$ ,  $r_{pbi} = -0.14$ ), favoring the first group, whose mean was 0.15 points higher. The ratings assigned by Southern African readers were higher by 0.19 points ( $u = 1360606$ ,  $p < 0.001$ ,  $r_{pbi} = -0.05$ ).

To examine **H<sub>1-bis</sub>**, we started by calculating effect sizes of the 10 LIWC categories used to determine the empathy scores. An overview of the results is offered by Figure 3.

It should be noted how, while the highest effect size is reached by the "pronoun" category (inevitably filled by function words), the more content-oriented categories of "posemo" (i.e. positive emotions) and "affect" follow in second and third position. By repeating the same analysis for single words (see Figure 4 for the 15 words with the highest effect sizes) it becomes evident how, while the biggest differences are produced by pronouns, content words like "good", "relate\*",



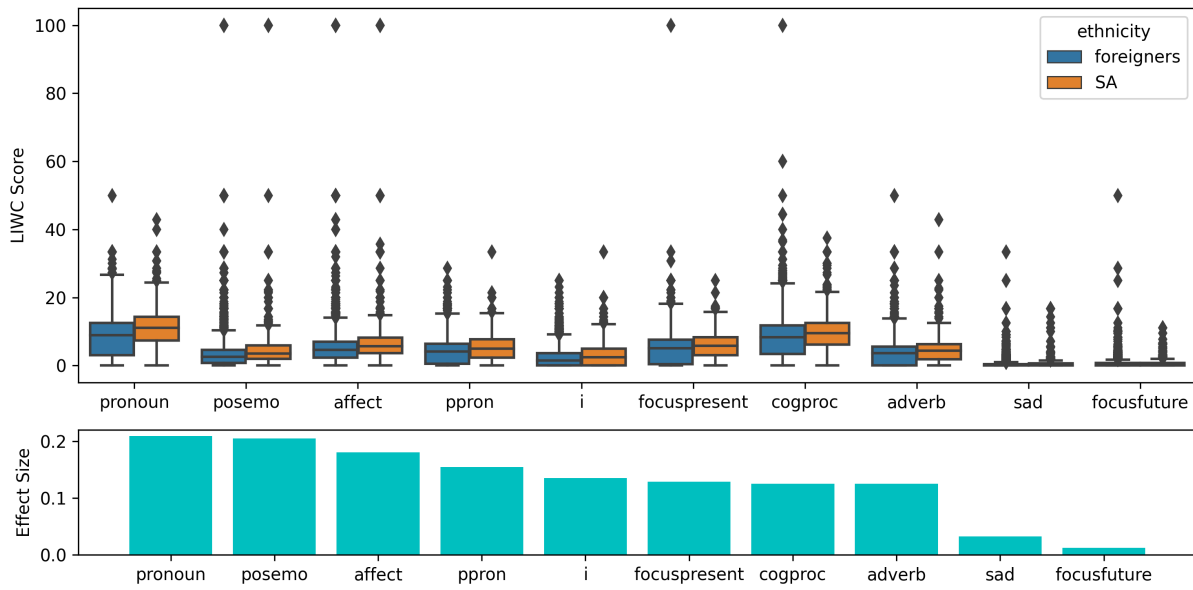


Figure 3: Effect size for LIWC categories

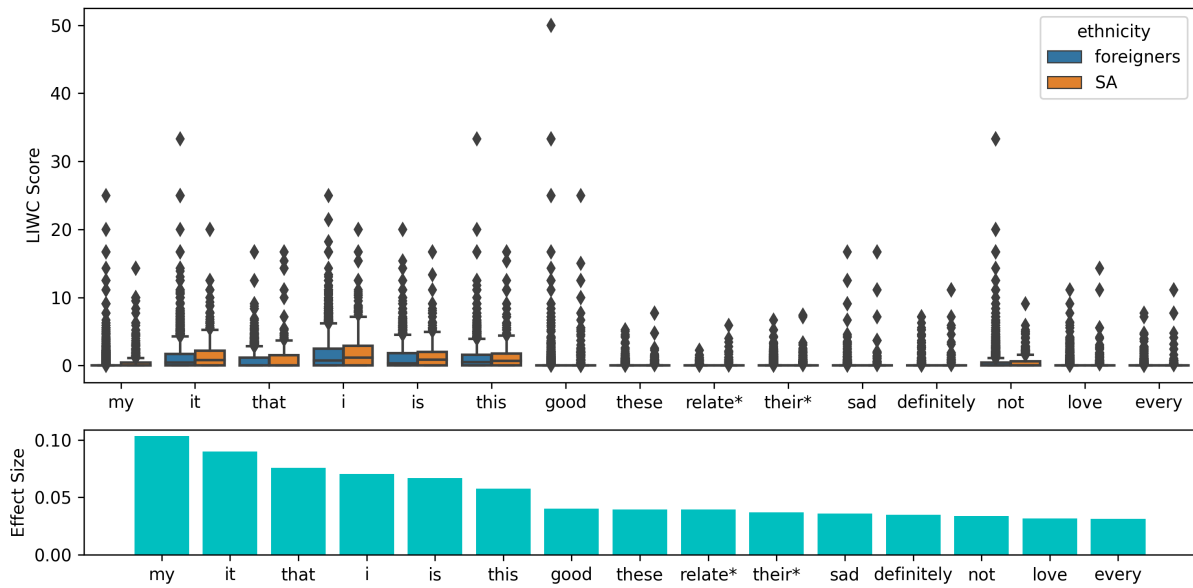


Figure 4: Effect size for single words (top 15)

“sad” and “love” contribute strongly to the distinction between the two groups. And while a term like “relate” testifies powerfully to a possible empathic involvement of reviewers, also pronouns like “my” and “i” confirm such a possible tendency, by highlighting a first-person involvement of review-

ers.

Such a result is strengthened by the outcome of our second analysis, performed by following the rationale described above. As the highest empathy scores were reached by Southern African reviewers, we limited the dataset to the authors who do



not come from countries in the region of Southern Africa (their works were tagged as pertaining to it solely by virtue of their content). These authors were: Norman Rush, James A. Michener and Jennifer McVeigh. This partitioning led to a significant difference in terms of empathy scores, opposite to the one registered over the whole dataset ( $u = 4563.5, p = 0.03, r_{pbi} = 0.08$ ), where foreign reviews scored 0.12 points higher.

With respect to **H2**, books that won literary prizes scored lower in terms of empathy ( $u = 3749895, p < 0.001, r_{pbi} = -0.08$ ), but were awarded higher ratings ( $u = 4316160, p = 0.002, r_{pbi} = 0.03$ ).

Finally, with reference to **H2-bis**, both the ANOVA models showed significant effects of both our grouping variables. However, only the one with empathy scores as the target revealed a significant interaction between them ( $F(2, 5183) = 4, 45, p = 0.001$ ). As can be seen in the marginal means graph (Figure 5), in the group of foreign readers empathy scores are slightly lower for books that won Africa-specific than they are for books that won international prizes, but rise significantly for books that did not win any prize. With regards to Southern African reviewers, however, books that won Africa-specific prizes scored subtly less than books that did not win any prize, while the score drops significantly for books that won international prizes.

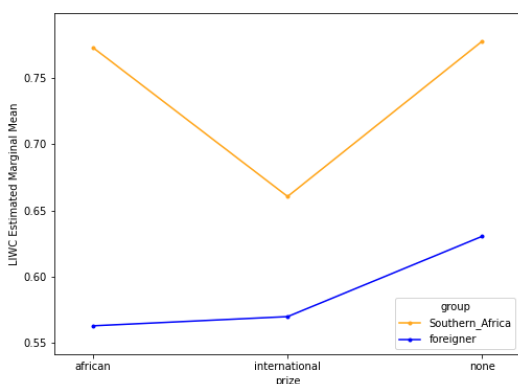


Figure 5: Effects of reviewers' ethnicity and books' literary prestige on empathy scores

## 4 Discussion

The fact that we were able to detect a significant difference between the empathy scores and the ratings of Southern African and foreign reviewers, with the former group scoring the highest in both measures, confirms our hypothesis (**H1**) that ethnicity plays an important role in readers' engagement with narratives. In particular, it appears that sharing the author's region of provenance leads readers to appreciate the book more and to have a higher empathic response to it.

As mentioned above, there was the possibility that the effect we observed with our empathy measure was actually due to the reviewers' nationality rather than their empathic transportation (**H1-bis**). However, a deeper analysis of the LIWC scores does not provide any strong evidence to support such an hypothesis. Also, if this were the case, such an effect should remain constant regardless of which books the reviews are based on. The fact that it is possible to find a sub-portion of our dataset where the difference between the empathy scores of Southern African and foreign reviewers is the opposite of the one measured over the entire dataset, advises against such a possibility. Furthermore, the fact that such sub-portion can be formed based on authors' ethnicity brings additional support to the confirmation of our main hypothesis.

Literary prestige has been found to influence both the books' appreciation and the empathic response they elicited. However, contrary to what could be hypothesized from the standpoint of an essentialist view of literature (**H2**), books that won literary prizes tend to elicit a smaller empathic response than the ones that did not. We believe that this result speaks about the sociocultural criteria behind the awarding of a literary prize, namely about the fact that critics may associate literary quality with more thoughtful and less emotionally moving narratives, and thus award the books that reflect such a quality. This would explain why in our dataset empathy scores are lower for award-winning books, while star-rating – a more general metric of aesthetic appreciation, which we should expect to be in line

with sociocultural criteria of literary quality – are higher.

Furthermore, our findings are in line with research in the field of neurocognitive poetics (Jacobs 2015), which conceptualizes literary texts as composed by: a) backgrounding elements, which activate readers’ familiar cognitive schemata and, by facilitating immersion into the story-word, can increase their empathic response (Bal & Veltkamp 2013, Walkington et al. 2020); and b) foregrounding elements, which, by presenting readers with unusual and unexpected stylistic strategies, elicit in them an aesthetic response. Accepting this theory, and assuming that empathic and aesthetic response are elicited by separate sets of features, we can expect books awarded with literary prizes to constitute a sample characterized by a more aesthetic aim, and thus to rely more on foregrounding elements than on backgrounding, empathy-inducing ones. This would explain the negative effect that in our corpus literary prestige have on empathic engagement.

When operating with concepts such as ‘literariness’ or ‘literary quality’, one must always be aware of their historical and cultural nature. There does not exist something as a universally valid standard of literariness (Salgaro 2015). Even the polarity that we discussed, opposing literary quality to the ability to elicit empathic responses, is likely to be the product of a very specific idea of literary quality, that can be traced back to European modernism. Indeed, data in our study – in particular the interaction between the two grouping variables observed in the ANOVA model – argue in favor of such historicistic view. Such an effect could in fact show once again the role played in the reading act by ethnicity (**H2-bis**). All the prizes that we categorized as “international” come from the anglo-saxon world, which we have seen to be over-represented in our sample. It could very well be that the books awarded with these prizes are simply closer to the sensibility of anglo-saxon readers. This, notwithstanding the negative effect of literary prestige, could lower even further the empathy scores of these books for readers from Southern Africa, while raising it (in a

less pronounced manner, since reviewers in this category are predominantly, but not exclusively from anglo-saxon countries) for foreign readers, which is exactly what we observed.

In conclusion, our data show that ethnicity plays an important role in the reception of literary works, supporting the postcolonial argument against any essentialist view of literature.

## 5 Conclusion

Upon concluding, we deem it useful to mention some potential limitations of the current study. First, it must be noted that information on social platforms such as Goodreads is not subject to any control, so it is possible that some of the data we collected about reviewers’ ethnicity or even about the reviews themselves do not correspond to the truth. Such errors are inevitable and will always result in some amount of noise that must be accounted for when, for instance, interpreting effect sizes’ magnitude or, more generally, analyzing the data. On the other hand, experiments on real subjects can allow for a higher degree of control and “cleaner” data. However, they require a lot more resources and result in way smaller samples that could hardly lend themselves to computational analysis.

Secondly, our measure of empathic engagement, despite being based on the rigorous work of Yaden et al. (2023) and returning coherent results, could be made more robust, for instance by testing it against a corpus of hand-annotated reviews. Such data could also be used, in turn, to train a machine-learning model, or to fine tune one of the existing Transformers models that predict empathy scores from text [6]. As demonstrated by Sharma et al. (2020), when backed by a robust (and labor-intensive) work of annotation, Transformers models can indeed achieve great performances in such a task.

Overall, it can be stated that our study, while reaching results that can contribute to the debates on postcolonialism, intersectionality, and literary prestige, has also set up the groundwork for a computational investigation of empathy in the context of





social reading that can and should be further developed by additional research.

Finally, it must be noted that, with the exception of Pardey (2023), no empirical studies has yet explored the topic of postcolonialism in online book reviews. We hope that our research can show how, thanks to their intrinsically democratic nature, social reading platforms can make manifest the preferences of an ethnically diversified audience and thus promote the formation of a wider and richer literary landscape.

## Notes

- [1] [https://www.goodreads.com/list/show/3514.Books\\_About\\_Colonialism](https://www.goodreads.com/list/show/3514.Books_About_Colonialism)
- [2] [https://www.goodreads.com/list/show/8821.Best\\_Postcolonial\\_Literature\\_fiction\\_and\\_nonfiction\\_](https://www.goodreads.com/list/show/8821.Best_Postcolonial_Literature_fiction_and_nonfiction_)
- [3] [https://www.goodreads.com/list/show/12118.Colonial\\_and\\_Post\\_colonial\\_Literature](https://www.goodreads.com/list/show/12118.Colonial_and_Post_colonial_Literature)
- [4] Due to copyright and privacy issues, we cannot publish the full corpus. All scripts used for the analysis are available in the project's GitHub repository: [https://github.com/SimoneRebora/Goodreads\\_postcolonial](https://github.com/SimoneRebora/Goodreads_postcolonial).
- [5] For reasons of transparency and to allow a deeper analysis of the lexical features, we decided to use an open-source version of LIWC, implemented in the Python package `liwc-analysis`, and adapted to improve its efficiency. More details can be found in the project's GitHub repository.
- [6] <https://huggingface.co/models?search=empathy>

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