

Supplementary Materials for *Gender Stereotypes in Hollywood Movies and Their Evolution Over Time: Insights from Network Analysis* (to appear in **Big Data and Cognitive Computing**).

S1. Changes in path weights of tropes across decades.

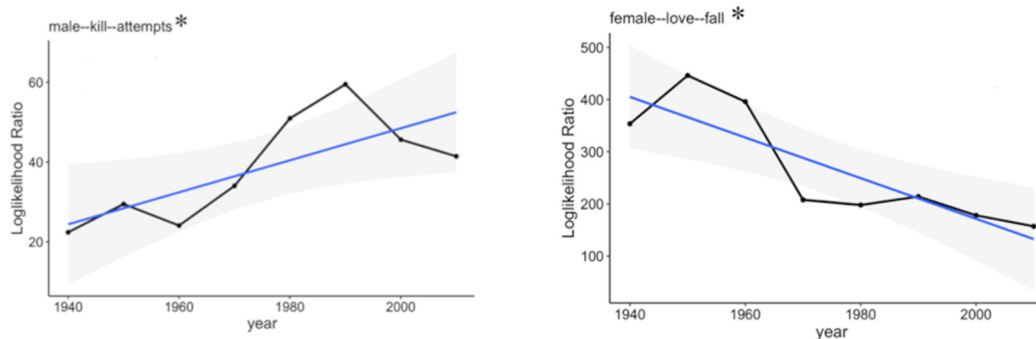
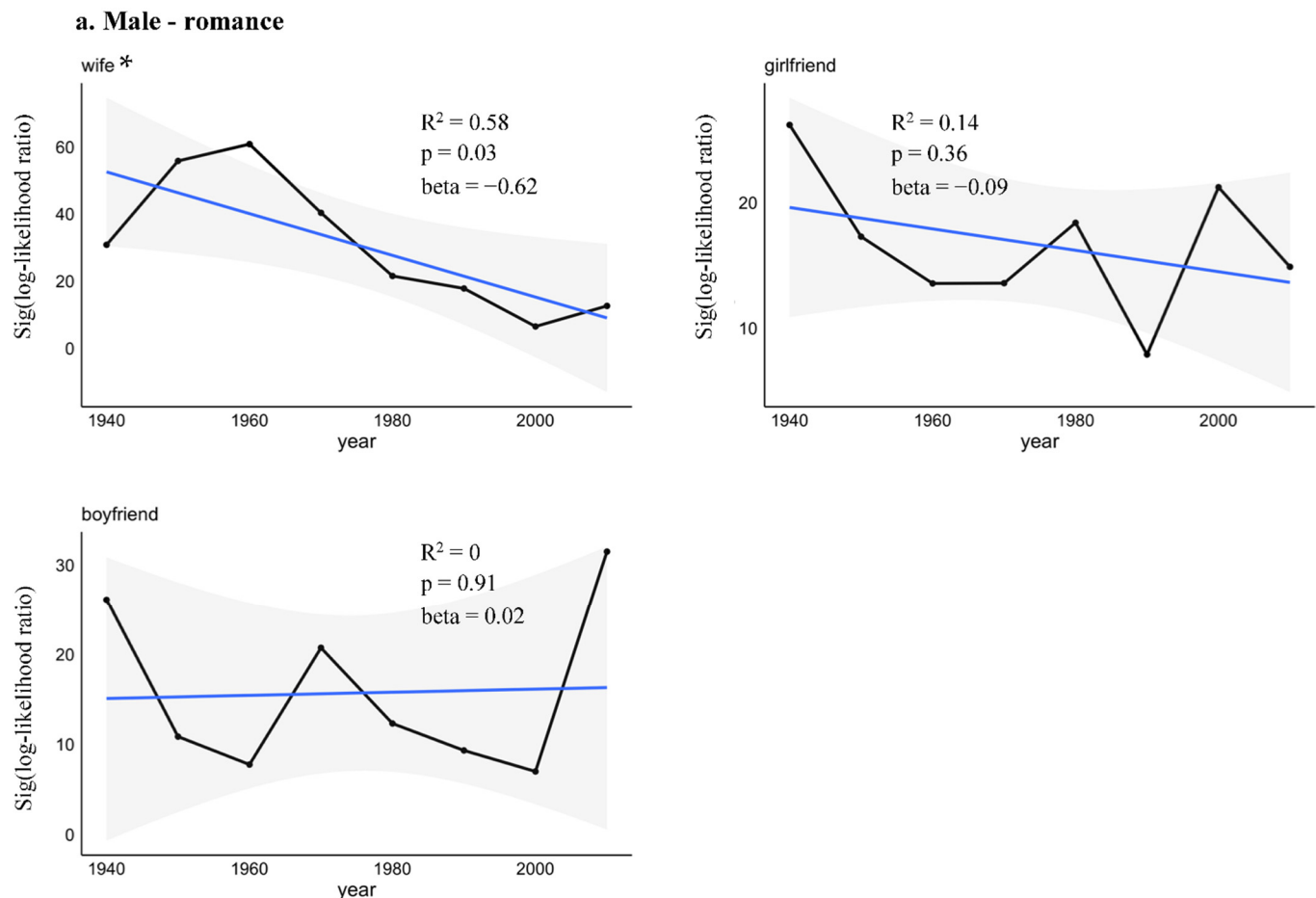
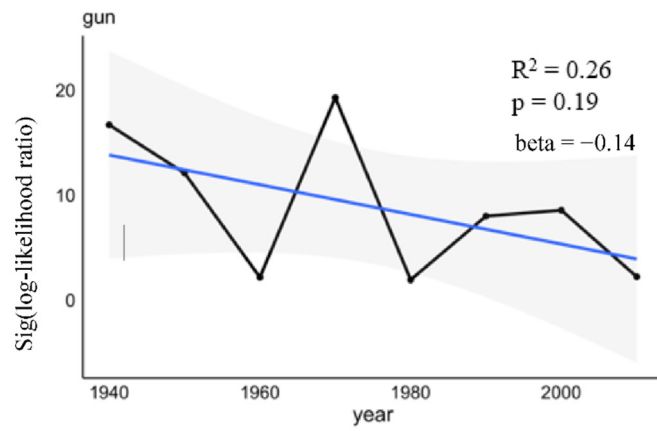
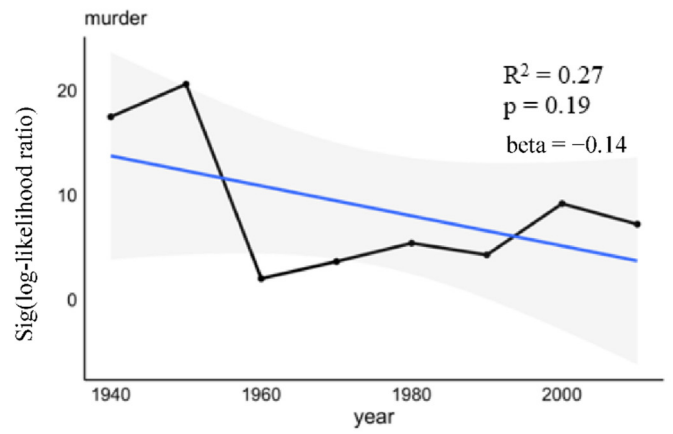
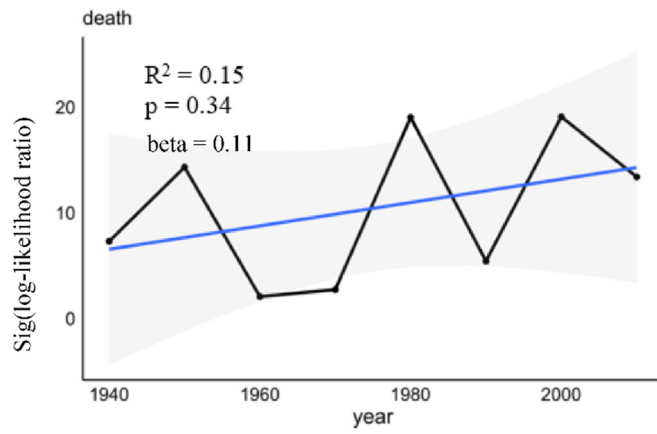


Figure S1. Changes in path weights of stereotypical tropes across decades. **(Left)** Path weight of 'male-kill-attempts' (representing the crime/violence trope) significantly increased over time ($R^2 = 0.55$, $\beta = 0.40$, $p = 0.03$). **(Right)** Path weight of 'female-love-fall' (representing the romance trope) significantly decreased over time ($R^2 = 0.73$, $\beta = -3.89$, $p = 0.01$).

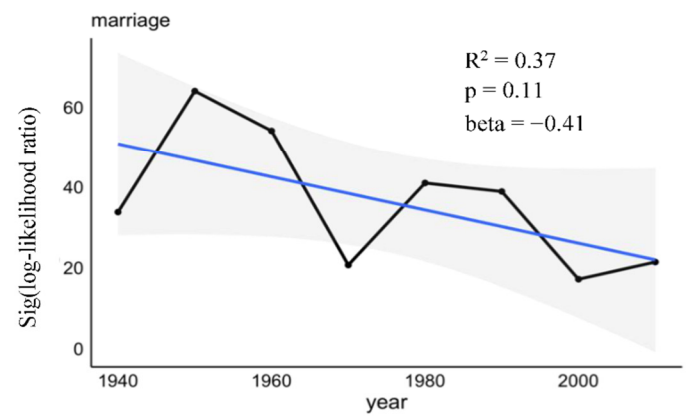
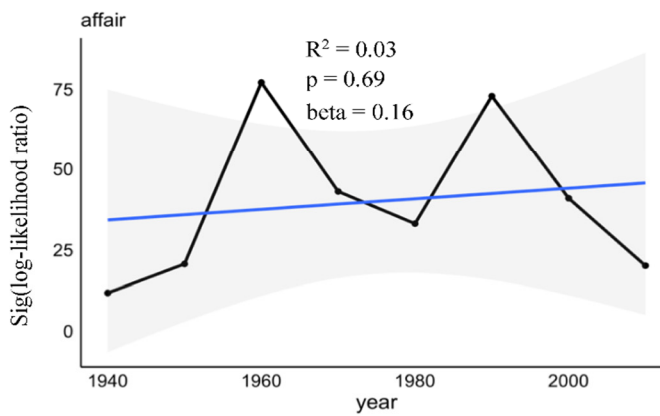
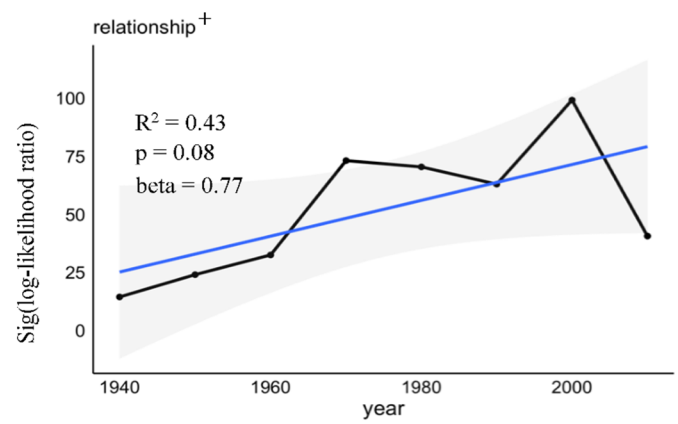
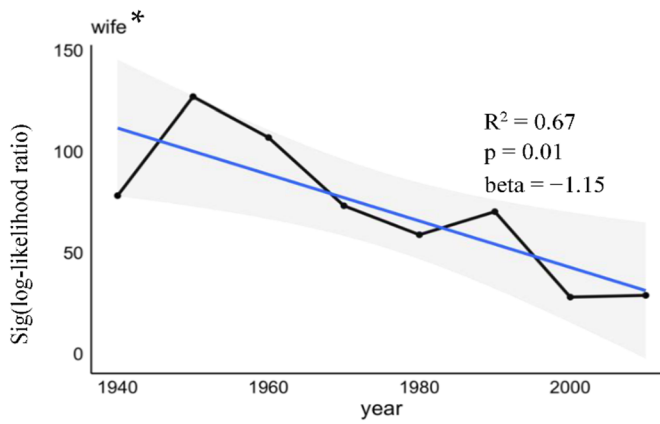
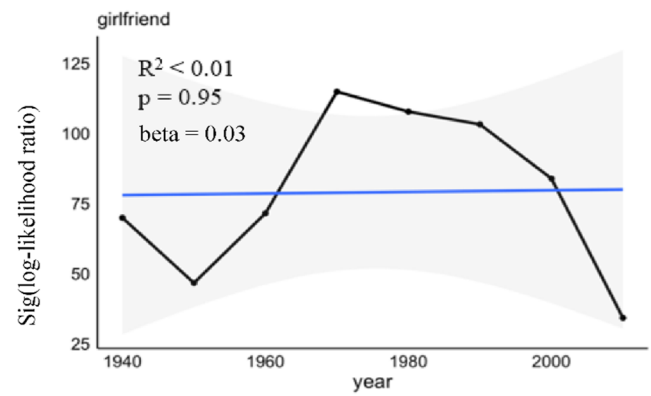
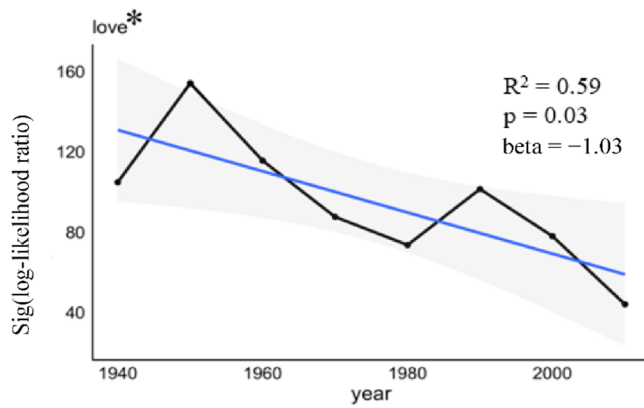
S2. Changes in edge weights of nouns associated with male and female characters.



b. Male - crime



c. Female - romance



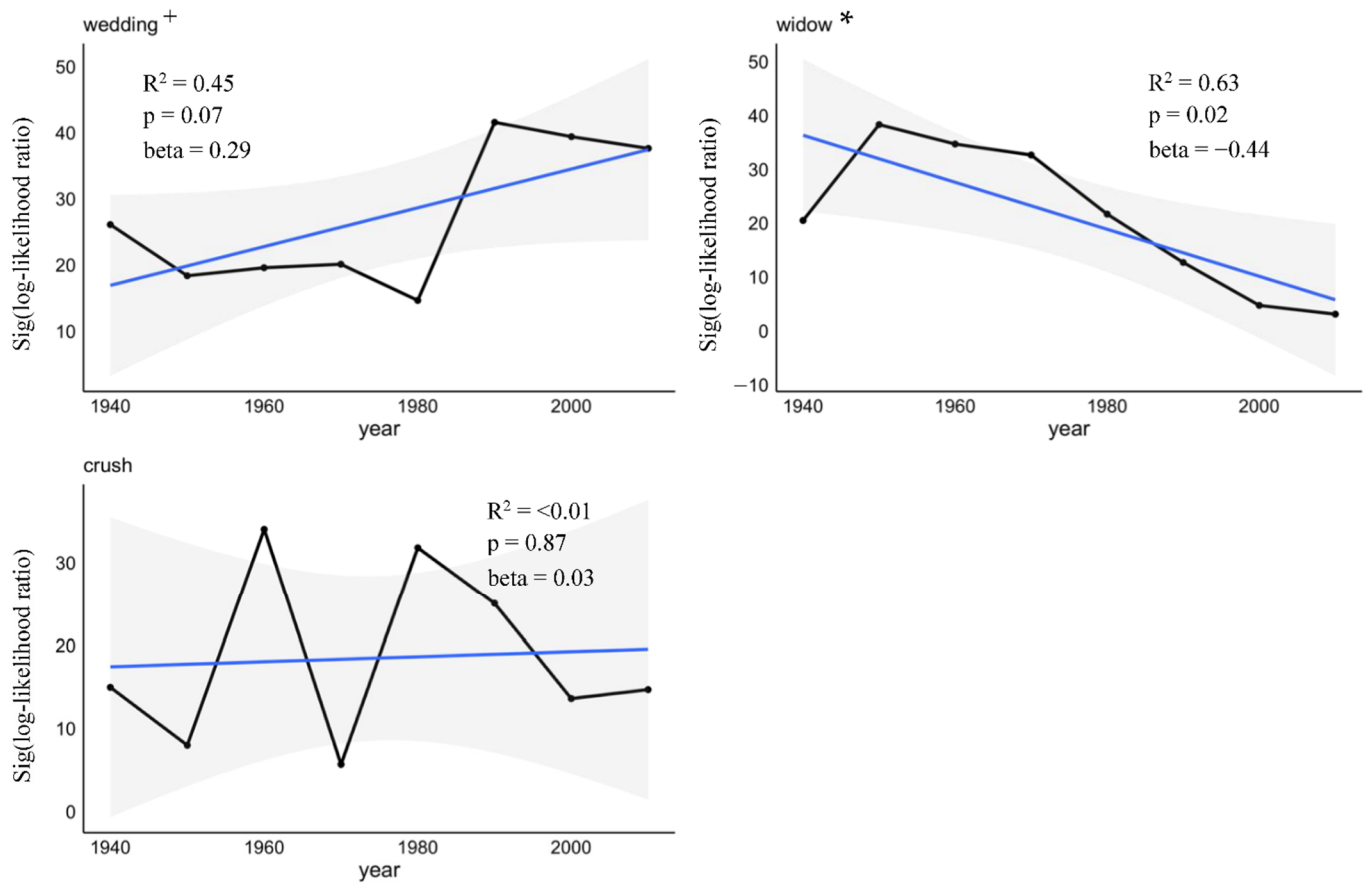
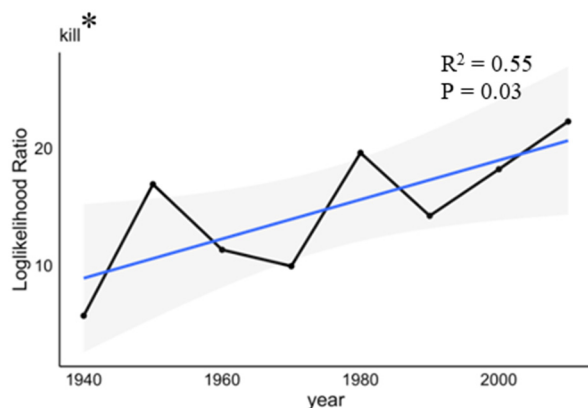


Figure S2. Linear regression models investigating changes in the edge weights of identified stereotypical primary noun associations of male and female characters. (a) The association of male characters with the noun ‘wife’ decreased significantly over the years. (b) Associations of male characters with nouns relating to crime did not significantly change across the years. (c) Associations of female characters with certain romance nouns, ‘love’, ‘wife’, and ‘widow’, significantly declined over the years, while associations with ‘relationship’ and ‘wedding’ significantly increased.

S3. Changes in edge weights of verbs associated with male and female characters.

a. Male - crime



b. Female - romance

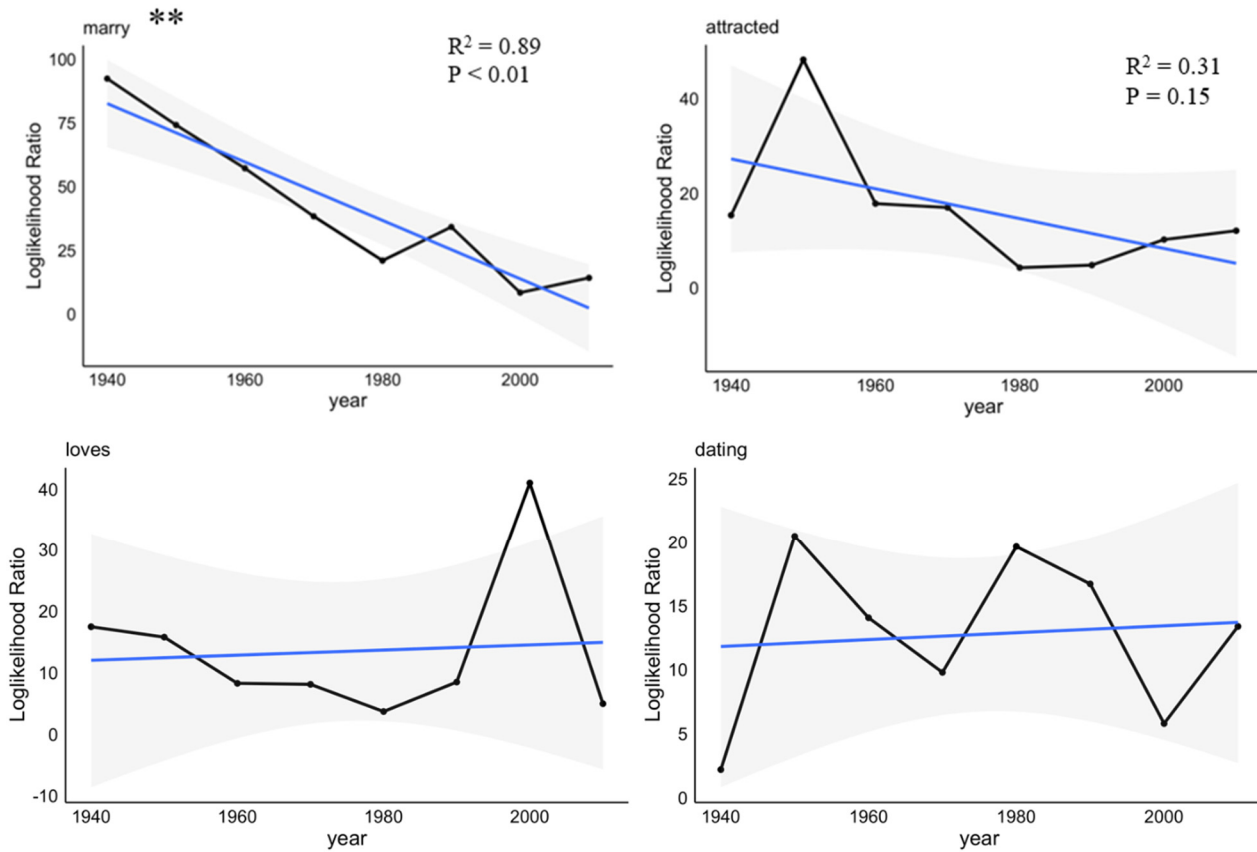
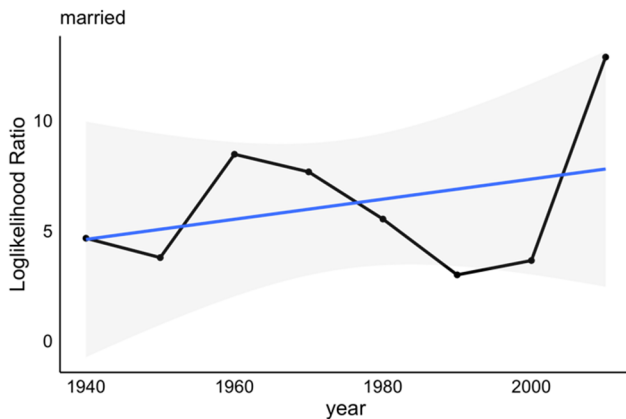


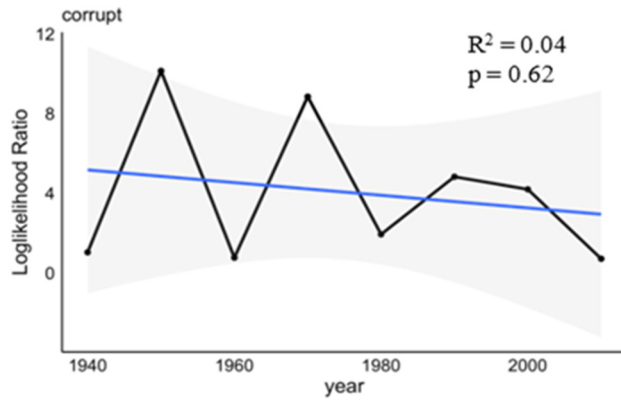
Figure S3. Linear regression models investigating changes in the edge weights of identified stereotypical primary verb associations of male and female characters. (a) The association of male characters with the verb 'kill' significantly increased over the years. (b) Associations of female characters with the verb 'marry' significantly fell over the years, whereas associations with 'attracted', 'loves', and 'dating' did not change significantly.

S4. Changes in edge weights of adjectives associated with male and female characters.

a. Male - Romance



b. Male - Crime/Violence



c. Female - Romance

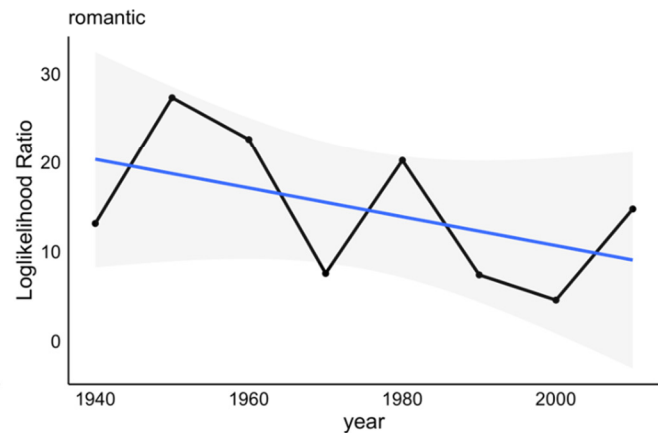
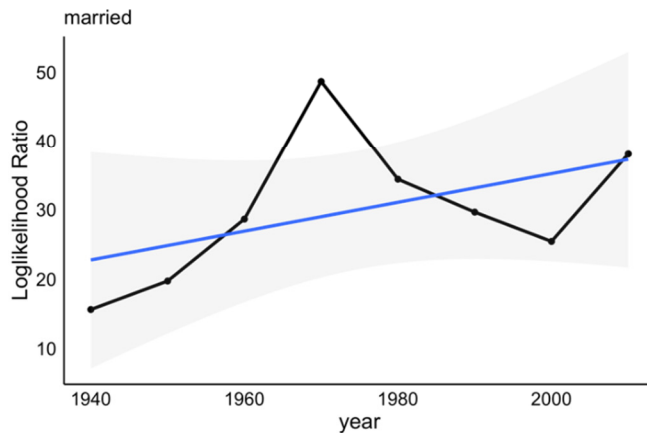
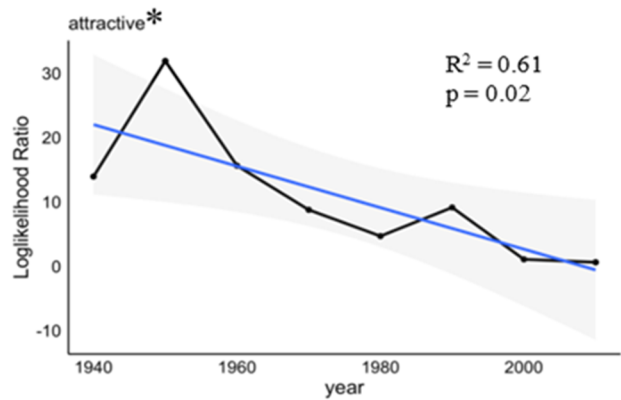
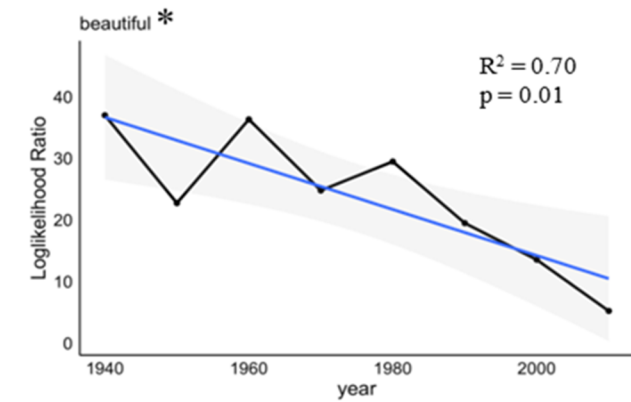


Figure S4. Linear regression models investigating changes in the edge weights of identified stereotypical primary adjective associations of male and female characters. (a) The association of male characters with the adjective 'married' did not significantly change over the years. (b) The association of male characters with the adjective 'corrupt' did not significantly change over the years. (c) Associations of female characters with the adjectives 'beautiful' and 'attractive', relating to romance, significantly fell over the years, whereas associations with 'married' and 'romantic' did not change significantly.