



The Sex of a Screenwriter: An Examination of Language Patterns and Ratings of Films

Taleen Nalabandian, Micah Iserman, & Molly E. Ireland

Department of Psychological Sciences, Texas Tech University
E-mail: taleen.nalabandian@ttu.edu or molly.ireland@ttu.edu



Introduction

Literature Review

- Many studies have examined the distinction of language use between women and men (Brownlow, Rosamon, & Parker, 2003; Colley et al., 2004; Mulac, Bradac, & Gibbons, 2001; Mulac & Lundell, 1986; Mulac & Lundell, 1994; Mulac, Lundell, & Bradac, 1986; Tausczik & Pennebaker, 2010), and the gender of authors and writers can be predicted through differences in language (Koppel, Argamon, & Shimoni, 2003; Thomson & Murachver, 2001).
- Corpus analyses (Ireland et al., under review; Newman et al., 2008) have determined that...
 - Women** use more first- and third-person singular pronouns, adverbs, auxiliary verbs, conjunctions, social words, psychological process words, negations, and verbs than men.
 - Men** use more >6-letter words, numbers, quantifiers, articles, prepositions, and swear words.
- However, research has neglected to uncover whether certain gendered language patterns within films scripts exist and if such patterns are associated with higher or lower ratings of professional critics versus audiences.

Hypotheses

- H1: Language use in screenplays will replicate differences found in past corpus analyses.
- H2: Men's scripts and male-typical language patterns will be more highly rated by critics, given that female scriptwriters are the minority.

Method

Sample

- 509 *IMSDB* Drama Scripts
 - Year of Release: 1932-2014
 - Screenwriters' Sex:
 - 87.4% Male
 - 7.1% Female
 - 5.5% Mixed-sex teams

Measures

- LIWC (Pennebaker, Booth, Boyd, & Francis, 2015) measured relative frequency of each gender-linked language category (% of total words used).
- Composite Rating Variables
 - Critic ratings (*Rotten Tomatoes*) and audience ratings (*Rotten Tomatoes* and *IMDB*)

Design

- Regressed audience and critics' ratings on gender-linked language categories in a series of linear regressions.

Table 1. *Film Ratings by Scriptwriter Sex*

	IMDB Audience <i>M (SD)</i>	RT Audience <i>M (SD)</i>	RT Critics <i>M (SD)</i>	<i>N</i>
Men	7.25/10 (0.78)	74.6% (16.58)	72.3% (23.17)	445
Women	6.98/10 (0.74)	72.7% (15.77)	71.6% (20.59)	36
Mixed-sex team	7.08/10 (0.58)	69.9% (13.03)	70.0% (23.40)	28

Results

Gender Differences in Scripts

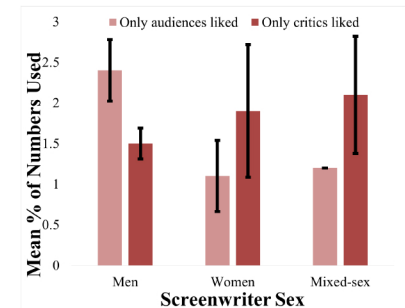
- Consistent with past research, women used fewer articles ($t(506)=-3.10, p=.002$) and more social words ($t(506)=2.50, p=.013$) as well as more she/he-words ($t(506)=2.74, p=.006$) compared to male screenwriters.

Film Critics' vs. Audience Preferences

- Professional critics** favor films with a **more feminine writing style**, including more...
 - Negations**, verbs*, pronouns**, I-words**, and auxiliary verbs***
- Audiences** prefer films with a **more masculine writing style**, including fewer...
 - Negations**, pronouns***, I-words†, auxiliary verbs*
- A significant three-way interaction effect (Figure 1) illustrated that **critics** prefer films by **women** using **more numbers** and films by men using less numbers, while **audiences** prefer films by **women** using **fewer numbers** and films by men using more numbers ($t(497)=-2.14, p=.033$)
 - Audiences** enjoy films where the screenwriter adheres to a gender-congruent writing style.
 - Critics** enjoy films where the screenwriter uses a gender-incongruent writing style.

Note: All p-values are two-tailed: † $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 1. *Screenwriter Sex x Audience Ratings x Professional Critic Ratings Interaction Effect for Mean Percentage of Numbers Used in Scripts*



Discussion

- The film industry is notorious for gender inequality: female screenwriters of film and television receive lower pay than male screenwriters of the same age and experience (Bielby, 2009; Bielby & Bielby, 1996).
- Examining how sex and gender-linked language relate to films' receptions may help us understand these disparities.
- Professional critics favor films that follow feminine language patterns; audiences prefer films that follow masculine language patterns.
- However, critics highly rate films by screenwriters who abandon a gender-typical writing style and audiences highly rate films by screenwriters who follow a gender-typical writing style.



TEXAS TECH UNIVERSITY
Department of Psychological Sciences