We are what we watch: movies’ contents are predictive of their audience personalities

Abstract
With the growing prevalence of on-demand video streaming services, humans are consuming personalized media in an unprecedented pace. As for 2017, the online streaming service Netflix alone has reached 100 million users, who altogether watched one billion hours of personalized media content each week. But despite the ubiquity of personalized media consumption, little is known about how psychological traits are expressed by individual preferences for media content. Are personality traits systematically associated with preferences for media content? We address this question by combining data of two sources: (1) myPersonality - a Facebook app that ran from 2007 to 2012, and presented the opportunity for Facebook users to take real personality questionnaires and get feedback on their results. Using the myPersonality database, we created personality profiles for 854 movies, by averaging the Big Five personality scores of all users who “liked” these movies on Facebook. (2) IMDb - an online database that contains information about over 5 million titles of movies and TV episodes (e.g., box office revenue, critics rating). IMDb includes user-generated keywords that describe “any notable object, concept, style or action that takes place during a title”, on which we relied for measuring the movies’ content. We trained a machine learning algorithm to predict the personality profiles of the movies, based on their user-generated keywords on IMDb, and found that user-generated keywords are predictive of movies’ personality profiles, with predictive accuracies that range between r=.5 and r=.6, for all of the Big Five traits. Moreover, user-generated keywords enabled predicting the personality profiles of the movies above and beyond their audience demographics (e.g., age, sex) and more general movie characteristics (e.g., box office revenue and critics rating). Further exploratory analyses revealed intriguing associations between specific keywords and personality traits (e.g., the keyword “surrealism” is associated with high openness to experience, and the word “psychiatrist” is associated with high neuroticism). These findings establish robust links between personality traits and preferences for media content, with implications for media marketing and the development of content-recommendation systems.