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Citation	Morgan E. Ellithorpe, David R. Ewoldsen, Xuejing (Shay) Yao & Lanier F. Holt (2023) I Help You, You Help Me: Interracial Reciprocity in Situation Comedies Influences Racial Attitudes, Media Psychology, https://doi.org/10.1080/15213269.2023.2266680
DOI	https://doi.org/10.1080/15213269.2023.2266680
Download date	2026-04-10 22:39:09
Link to Item	https://hdl.handle.net/20.500.14694/3479

I help you, you help me: Interracial reciprocity in situation comedies influences racial attitudes

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Abstract

In this manuscript, three studies examined the effects of viewing situation comedies on attitudes toward Black Americans. Study 1 was a content analysis of sitcoms that had either predominately Black casts (PBC) or predominately White casts (PWC) and showcased interracial interaction. It found that positive cross-racial interaction (interracial reciprocity) occurs in both types of shows, but is more common with PBC sitcoms. Study 2 was a survey that found watching PBC sitcoms was associated with reduced prejudice; while watching PWC sitcoms was associated with increased prejudice. These effects were mediated by positive reciprocity expectations, as explicated by Bounded Generalized Reciprocity theory. Study 3 was an experiment that found exposure to increased scenes of interracial reciprocity in PBC was associated with less negative attitudes toward Black Americans through the mechanism of reduced negative reciprocity expectations. Overall, we found sitcoms are associated with activating racial prejudice. However, the direction of these beliefs is in part determined by if the casts of these shows are predominantly Black or White.

Keywords: sitcoms; genre; reciprocity; prejudice; exemplification theory

Situation comedies (sitcoms) have historically presented the gamut of portrayals of Black individuals. From the 1950s through 1970s, the depiction of Black Americans in sitcoms tended to be negative; often depicting Blacks as distant parental figures, with little love between spouses, and engaging in intrafamily aggression (Merritt & Stroman, 1993). Another work classified the depiction of Black Americans by decade, with the 1950s offering only “scraps,” with authentic Black characters largely nonexistent and Black actors having to work within the confines of their characters (Bogle, 2015). Through the 1960s and 1970s, roles for Black actors became more numerous, but often were still constrained for White audiences and used by the writers as cultural symbols in a changing society, again leading the actors to make what they could from the roles they were given in order to find some authenticity for Black audiences (Bogle, 2015). However, over time, African American depictions on television became more authentic and positive, though with many criticisms and failures of representation notwithstanding (Banjo, 2019; Bogle, 2015; Merritt & Stroman, 1993). Notably, Banjo (2019) found recent awards and major roles going to Black actors being touted as advancements in film and television, writing, “On the surface, there seems to be progress, but it is clear that these are merely incremental improvements and diversity efforts in the film industry continue to lag.” (p. 90). In addition to frequency and positivity of roles for Black Americans, depictions of interracial interactions have also become more frequent and positive, albeit, often emotionally detached, as of the mid-1990s (Weigel et al., 1995).

Some scholars argue that increased positivity in representation is *prima facie* a good thing. The depiction of Black characters who are successful, loving, and of high social status provides positive exemplars with whom Black audiences can identify, and experience self-esteem benefits and identity affirmation (Ward, 2004). This positive depiction of Black

characters also provides positive exemplars for non-Black audiences to identify with and engage in parasocial contact (Jhally, 2019; Schiappa et al., 2005). However, two major criticisms of such portrayals remain. First, sitcoms have been criticized for creating an unrealistic world in which racism and discrimination no longer exist (Jhally, 2019; Shanahan & Morgan, 1999). This may be inherent to sitcoms, because as a genre they tend to avoid heavy societal problems in favor of smaller, everyday problems that are easily solved. Indeed, the result of this ‘post-racial world’ presented by sitcoms might be that Black sitcom characters are processed by audiences as atypical counter-stereotypes. When a positive counter-stereotype is perceived to be atypical it can lead to an even more negative view of the group (Bless & Burger, 2016; Bodenhausen et al., 1995). Specifically, sitcom portrayals may create a bifurcated image pitting the wealthy, successful characters on their screen whom viewers love and admire, versus the perception that Black Americans in real life are neither wealthy nor successful and Blacks have only themselves to blame for that outcome (Jhally & Lewis, 1992; Matabane, 1988).

However, more recent work has found the opposite. A meta-analysis of mediated contact found a relationship between exposure to positive exemplars and reduced prejudice (Banas et al., 2020). For example, positive counter exemplars presented in entertainment media was associated with reduced prejudice towards Black Americans and increased support for affirmative action (Ramasubramanian, 2011). Research in a crime news context has also found evidence that counterstereotypes can reduce prejudice (Holt, 2013). However, none of these studies were specific to the sitcom genre, the

conventions of which may be unique in terms of how it deals with race and interracial interactions.

Bounded Generalized Reciprocity

Recent research on in-group favoritism and out-group bias, theorizes that reciprocity expectations play a critical role in the creation and maintenance of in- and out-groups. Specifically, Bounded Generalized Reciprocity (BGR) theory posits that people are more likely to act positively (i.e., be more kind, allocate more rewards, be more cooperative) to ingroup members than outgroup members, or strangers (Balliet et al., 2014; Romano et al., 2017). This is because helping or cooperation can be costly, and ingroup members are assumed to share the same goals, and therefore be more trustworthy than outsiders (Balliet et al., 2014; Romano et al., 2017; Yamagishi et al., 1999; Yamagishi & Kiyonari, 2000). BGR maintains that individuals have a group heuristic (Yamagishi et al., 1999), which reflects the normative expectations about reciprocity; in-group members are expected to reciprocate and outgroup members are not expected to reciprocate. The group heuristic generally results in individuals favoring in-group members whom they expect to reciprocate their kindness, and disparage outgroup members from whom they do not have this expectation (Balliet et al., 2014; Romano et al., 2017; Yamagishi et al., 1999; Yamagishi & Kiyonari, 2000). Therefore, reciprocity expectations are associated with intergroup attitudes to the extent that a person has low reciprocity expectations for an outgroup, their attitudes toward that outgroup will be negative (Chiang, 2021; Panchanathan & Boyd, 2004; Tusicisny, 2017).

However, an individual group member's cooperative behavior has been demonstrated previously to influence the reputation of the entire group, in a process known as "unbounded" reciprocity (Balliet et al., 2014; Mifune et al., 2010; Romano et al., 2017). Unbounded

reciprocity holds that individuals are motivated by self-interest and will cooperate across groups when it fits their needs. For example, cooperation with particular ingroup members tends to disappear when it is found that ingroup members are unhelpful (Velez, 2015; Yamagishi & Kiyonari, 2000). However, cooperation with outgroup members will increase when it is shown that outgroup members have previously been helpful and trustworthy (Velez et al., 2014). In short, individuals do not indiscriminately give preferential treatment to ingroup members, rather, if an outgroup member demonstrates positive reciprocity, then those positive behaviors will be reciprocated. Therefore, reciprocity – bounded and unbounded – is hinged on group expectations and bias.

Reciprocity Expectations Through Media

Exemplification theory involves the transference of the traits of an exemplar (e.g., a particular individual) to the exemplified group. Exemplification typically requires exposure to multiple exemplars (Zillmann et al., 1992). Direct intergroup interactions and friendships between Black and White Americans remain rare (Smith et al., 2014), even in the age of unlimited networks on social media (Hofstra et al., 2017; Wimmer & Lewis, 2010). Thus, the media remain an important avenue for groups to gain knowledge about each other (Holt, 2013), and a likely source of exemplification. Research based on BGR in the context of video games has found that cooperation with an outgroup member in a team-based video game increased pro-social behavior toward that person later (Velez, 2015), and increased pro-social behavior towards other members of the outgroup (Velez et al., 2012). Additional research has found that vicarious helping behavior, as seen through an outgroup member depicted as helping an ingroup member in a video clip, can also increase expectations of positive reciprocity and reduce prejudice (Ellithorpe et al.,

2022). This suggests that mediated intergroup helping behaviors, when they do occur, can influence BGR processes.

In addition to exemplification theory, the vicarious contact hypothesis (Joyce & Harwood, 2014), can also provide a theoretical basis for how exposure to mediated interracial interactions could influence real-world beliefs. Vicarious contact focuses on ingroup and outgroup characters interactions in media, and posits that these interactions are vicariously experienced by the viewer (Joyce & Harwood, 2014). Research has consistently found that attitudes toward outgroups can be changed through this vicarious pathway (Banas et al., 2020; Mazziotta et al., 2011; Moyer-Gusé et al., 2019). In the context of reciprocity beliefs, previous research has found that positive and negative reciprocity beliefs about Black Americans can be influenced by exposure to interracial reciprocity behaviors in media (Ellithorpe et al., 2022; Holt et al., 2022).

The Present Studies

The present studies focus on situation comedies as a specific media genre that is likely to include depictions of interracial reciprocity behaviors. By convention, sitcoms consist of a set group of characters who repeatedly face exigencies that must be resolved (Mills, 2009; Williamson, 2008). Each episode involves the resolution of the conflict and (because it is comedy), everything works out in the end (Mills, 2009). Consequently, the same characters repeatedly reciprocate each other's helping behavior with the result of a mutually beneficial (and typically humorous) ending. Further, the convention of three cameras found in sitcoms (Mills, 2009) also re-emphasizes the reciprocal nature of the characters' interactions. Two of the cameras are set up for reaction shots – e.g., mid-shots of each character that allows for the reaction of the character to be captured – and this tends to result in multiple shots focusing on

both the crisis and the reciprocity between characters that results in its resolution. In other words, the narrative structure of sitcoms necessitates characters working together to resolve a problem in a humorous manner, and the standard formal features of the genre emphasize the reciprocity between characters via the camera work. However, this assumption is based in conjecture from genre theory. To our knowledge, no other research has empirically tested the depictions of reciprocity in sitcoms and the effects those depictions have on viewers. Even more specifically, we are aware of no research to date on *interracial* reciprocity depictions in sitcoms.

Crucially, for reciprocity depictions in sitcoms – should they exist – to influence attitudes toward Black individuals, Black characters need to exist in the sitcom, and interact reciprocally with White characters. Unfortunately, as previously established, Black characters are underrepresented in popular media, and positivity in their depictions are even more underrepresented. We therefore distinguish between sitcoms with predominately Black casts (PBC), which have many Black characters depicted in a variety of contexts, from sitcoms with predominately White casts (PWC), which should involve little or no portrayal of Black characters. In PWC, the usual BGR processes should take effect, in which the ingroup is expected to reciprocate and the outgroup is not given the composition of the cast. However, in PBC sitcoms, we expect there could be more depictions of reciprocity across groups, and therefore a stronger likelihood for those depictions to influence reciprocity beliefs and attitudes from an exemplification and vicarious contact perspective. To examine this, we conducted three studies: first, a content analysis to establish the relative frequency of interracial reciprocity behaviors in different types of sitcoms. Second, a survey intended to make the initial demonstration of

a relationship between viewing sitcoms and reciprocity beliefs. Third, an experiment designed to test the relationships from Study 2 in a way that is more clearly suited for causal interpretation. Together, these studies provide information about the likelihood of interracial reciprocity in the sitcom genre (Study 1), and whether exposure to this interracial reciprocity is associated with changes in beliefs and attitudes toward Black Americans both cross-sectionally (Study 2) and experimentally (Study 3). Thus, we are applying the theory of BGR in the context of interracial sitcoms, while considering the racial composition of the cast, to study interracial bias in media.

Study 1

For this content analysis, we included sitcoms that included at least one Black main character for purposes of seeing interracial interaction. In our research, interracial interaction is defined as an interaction between at least one White and one Black character, and interracial reciprocity is defined as a Black character reciprocating help from a White character or a White character reciprocating help from a Black character. Previous research on depictions of interracial interactions finds such interactions to be rare overall, but when they do occur they tend to be fairly positive, if impersonal (Riles et al., 2018; Weigel et al., 1995). Based on this, we can tentatively expect that we will find relatively few interactions and even fewer that meet the definition of reciprocity, but when reciprocity does occur, it will likely be positive due to conventions of the sitcom genre. However, we suspected that it could matter if the overall racial makeup of the show's cast was diverse, or if the Black character in question was more of a rarity. Therefore, we also look separately at shows with predominately White casts (PWC) and those with predominately Black casts (PBC; for definitions see methods below). Because we are starting from the point in which very little research has been conducted on this topic regarding sitcoms, we began with a general research question:

RQ1: To what extent will positive and negative interracial reciprocity be depicted in sitcoms, and will there be differences based on whether the show cast is predominately Black or White?

Study 1 Methods

Sample

The sample was drawn from a list of the 250 top-rated television sitcoms from 1991–2018, according to Nielsen.¹ A predominately Black cast was determined based in definitions used in previous research (Ellithorpe et al., 2017; Schooler et al., 2004). Ten sitcoms were selected from each of: (1) exclusively Black cast with no White recurring characters (i.e., all eight main characters were coded as Black), (2) predominately Black cast with at least one White recurring character (i.e., at least five of the main or recurring characters were coded as Black, with at least one main or recurring character coded as White), (3) exclusively White cast with no recurring Black characters (i.e., all eight main characters were coded as White), and (4) a predominately White cast with at least one Black recurring character (i.e., at least five of the main or recurring characters were coded as White, with at least one main or recurring character coded as Black). The stratification was used to increase variability in the likelihood of interracial interaction within each cast composition. However, because in the present set of studies we are more interested in cross-racial interaction and its effects, the four original categories were collapsed into PBC and PWC for analysis. Five episodes of each sitcom was randomly sampled from the entire episode list for the show. After sampling and resampling, only five sitcoms with a predominately Black cast, and at least one White main or recurring character, were available. Thus, a total of 175 episodes from 35 sitcoms were used for coding.

Coder Training

¹ More details for the sample selection in Study 1 can be found on OSF: https://osf.io/48swm/?view_only=d319459fa64d48eab6427010777de3b4.

One sitcom from each category was randomly selected for training. Fleiss' Kappa was calculated as an intercoder reliability measure for each variable. Three undergraduate research assistants were trained over the course of several weeks as coders. After reaching intercoder reliability on the key variables, the remaining 155 episodes (31 sitcoms) were divided among the three coders. Unit of analysis was the scene level, with a scene defined as a change in time and/or place (total scenes $n=973$). However, up to five interactions were coded per scene – allowing for multiple instances of reciprocity. We looked at both a version with a count of interactions and reciprocity per scene, as well as a dichotomous version for presence or absence in a scene.

Interracial interaction was coded as (1) if there was presence of any interaction between at least one Black and at least one White character (verbal or non-verbal), and as (0) if there was no such interaction (Fleiss Kappa=.83). *Reciprocity behaviors* between Black and White characters were coded with three categories (0–no reciprocity in the scene, 1–positive reciprocity in the scene, 2–negative reciprocity in the scene). Reciprocity was defined as an individual rewarding the other's helping behavior (positive reciprocity), or as retaliating against the other's hurting behavior (negative reciprocity; Fleiss' Kappa=.89).

Study 1 Results

There was a total of 828 interactions coded between Black and White characters in the sample (encompassing 317 scenes, 32.58% of all scenes). Within the 828 interracial interactions coded, 189 of them (22.83%) were coded as reciprocity across 124 scenes (12.74% of all scenes coded). Of those 189 interracial reciprocity scenes, 142 (75.13%) were coded as positive

reciprocity and 47 (24.87%) were coded as negative reciprocity. These represented 100 scenes (10.28% of all scenes coded) for positive reciprocity, and 37 scenes (3.80% of all scenes coded) for negative reciprocity.

In considering the total count of interactions, an independent samples t-test found a significant difference, in that PBC sitcoms included more interracial interactions ($M=1.06$, $SD=1.80$) than PWC sitcoms ($M=0.72$, $SD=1.54$), $t(971) = 3.26$, $p < .01$. A chi-square test for distribution of interactions for presence/absence within a scene by PBC and PWC was also significant, $\chi^2(1)=15.32$, $p < .001$. Pearson standardized residuals were above the threshold for significance of $|1.96|$ for presence of interaction in PBC sitcoms (2.53) and for presence of interaction in PWC sitcoms (-1.99), indicating there were significantly more interracial interactions than expected in PBC shows ($n=149$, 40.05% of scenes in PBC shows), and fewer than expected in PWC shows ($n=168$, 27.95% of scenes in PWC shows). Pearson standardized residuals were not significant for scenes without interracial interaction in either PBC shows (residual=-1.76, $n=223$, 59.95%) or PWC shows (residual=1.38, $n=433$, 27.95%). Note that the absolute number of scenes was higher in PWC shows but the proportion was lower; this is because there were more total scenes from PWC shows in the sample.

An independent samples t-test found that interracial reciprocity (regardless of valence) was also more common in PBC sitcoms ($M=0.33$, $SD=0.80$), compared to PWC sitcoms ($M=0.11$, $SD=0.38$), $t(971) = 5.75$, $p < .001$. A chi-square test for distribution of reciprocity interactions was significant, $\chi^2(1)=21.78$, $p < .001$. Pearson standardized residuals were above the threshold for significance of $|1.96|$ for presence of reciprocity in PBC shows (3.43), and for presence of reciprocity in PWC shows (-2.70), indicating there were significantly more scenes

with reciprocity interactions than expected in PBC shows ($n=71$, 19.09% of scenes in PBC shows), and fewer than expected in PWC shows ($n=53$, 8.82% of scenes in PWC shows).

Pearson standardized residuals were not significant for scenes without interracial reciprocity in either PBC shows (residual=-1.31, $n=301$, 80.91%), or PWC shows (residual=1.03, $n=548$, 91.18%).

An independent samples t-test found that positive interracial reciprocity was also more common in PBC sitcoms ($M=0.23$, $SD=0.66$) compared to PWC sitcoms ($M=0.09$, $SD=0.36$), $t(971) = 4.35$, $p<.001$. A chi-square test for distribution of reciprocity interactions was significant, $\chi^2(1)=14.90$, $p<.001$. Pearson standardized residuals were above the threshold for significance of $|1.96|$ for presence of positive reciprocity in PBC shows (2.87), and in PWC shows (-2.26), indicating that there were significantly more scenes with positive reciprocity interactions than expected in PBC shows ($n=56$, 15.05% of scenes in PBC shows), and fewer than expected in PWC shows ($n=44$, 7.32% of scenes in PWC shows). Pearson standardized residuals were not significant for scenes without positive interracial reciprocity in either PBC shows (residual=-0.97, $n=316$, 84.95%), or PWC shows (residual=0.77, $n=557$, 92.68%).

Finally, an independent samples t-test found that negative reciprocity interactions were also more common in PBC sitcoms ($M=0.10$, $SD=0.39$) compared to PWC sitcoms ($M=0.02$, $SD=0.15$), $t(971) = 4.45$, $p<.001$. A chi-square test for distribution of interactions was significant, $\chi^2(1)=19.66$, $p<.001$. Pearson standardized residuals were above the threshold for significance of $|1.96|$ for presence of negative reciprocity in PBC shows (3.42), and in PWC shows (-2.69), indicating there were significantly more scenes with negative reciprocity interactions than expected in PBC shows ($n=27$, 7.26% of scenes in PBC shows), and fewer than expected in PWC shows ($n=10$, 1.66% of scenes in PWC shows). Pearson standardized residuals

were not significant for scenes without interracial reciprocity in either PBC shows (residual=-0.68, $n=345$, 92.74%), or PWC shows (residual=0.54, $n=591$, 98.34%).

Study 1 Discussion

Interracial interactions, as well as both positive and negative reciprocity, were more common in sitcoms with PBC than in sitcoms with PWC. Positive reciprocity was overall more common than negative reciprocity, by a factor of three to one. In fact, reciprocity of any kind was more common in shows with predominately Black casts, and positive reciprocity was by far the most common form of reciprocity. However, knowing the content of the sitcoms is only half of the battle. Therefore, the following studies examine the relationship between content and effects.

Study 2

Study 2 tests how exposure to the interracial interactions and reciprocity instances found in the content analysis in Study 1 might be associated with beliefs and prejudice. As previously stated, vicarious contact research has suggested that viewing interracial contact in media can influence attitudes toward the groups depicted (Joyce & Harwood, 2014). As described in Joyce and Harwood (2014), and Park (2012), social learning occurs through vicarious contact as viewers internalize reciprocity beliefs when presented with examples of such behaviors in media involving a member of their ingroup and a target outgroup member. We are expanding this research to include expectations of reciprocity as an intergroup belief relevant to attitudes that could be affected by such vicarious contact. Specifically, we predict:

H1: Expectations of interracial reciprocity will mediate the relationship between exposure to sitcoms and prejudiced attitudes, such that increased exposure will be

associated with increased expectations of reciprocity, which will be associated with reduced prejudice.

We also expect that exposure to sitcoms with primarily Black vs. primarily White casts will be differentially associated with reciprocity beliefs, based on the content analysis in Study 1 which found more instances of reciprocity in PBC compared to PWC shows. As interracial reciprocity was much more common in PBC shows, greater exposure to PBC shows should also mean greater exposure to interracial reciprocity depictions. Exposure to PWC shows, however, should mean less exposure in one's media repertoire to reciprocity, as such instances were rare according to the content analysis in Study 1.

H2: Exposure to sitcoms with PBC will be associated with more positive expectations of interracial reciprocity, while exposure to sitcoms with PWC will be associated with less positive expectations of reciprocity.

Study 2 Methods

Participants

Participants were 396 undergraduates from a large Midwestern U.S. university who participated for course credit. Only those who self-identified as non-Hispanic White were included in analysis ($n=288$, 206 identified as female, 81 as male, 1 as other, $M_{\text{age}}=20.3$ years, $SD=1.59$)². One participant who reported other/prefer not to disclose for sex was not included in analysis, as one case in a cell is statistically problematic.

Procedure

² This decision was made due to research suggesting that racial and ethnic identity matter in the context of vicarious learning from interracial interaction in media (Kim & Harwood, 2020). The small number of participants reporting each racial identity aside from White made it difficult to statistically draw accurate conclusions about those groups. Rather than make unsubstantiated claims about individuals with those racial and ethnic identities, we opted to remove them from analysis. There were no substantive differences in the interpretation of results when only those who identified as White were included compared to when all people in the sample were included, across both studies with human subjects (Study 2 and Study 3).

The survey was conducted online using Qualtrics. Participants answered attitude questions before the media exposure questions (Shrum et al., 1998). The order of scales was randomized within the groupings of attitude questions and media questions, as were the questions within any composite scales.

Measures

Attitudes. The positive and negative attitudes toward Blacks scales were included as a measure of attitude. (Katz & Hass, 1988); positive, (10 items Likert scale from 0 (strongly disagree) to 10 (strongly agree); $M=5.77$, $SD=1.73$, Cronbach $\alpha=.85$), negative, (10-items Likert scale from 0 (strongly disagree) to 10 (strongly agree); $M=3.69$, $SD=1.62$, Cronbach $\alpha=.84$).

Reciprocity expectations. A 10-item scale was used to capture people's expectations that Black individuals will reciprocate positive and negative behaviors (Ellithorpe et al., 2022; Holt et al., 2022; Rheu et al., 2019). Five items measured expectations of positive reciprocity on a Likert scale from 0 (strongly disagree) to 10 (strongly agree; $M=5.95$, $SD=1.70$, Cronbach $\alpha=.79$). Likewise, five items measured negative reciprocity expectations on a Likert scale from 0 (strongly disagree) to 10 (strongly agree; $M=4.30$, $SD=2.05$, Cronbach $\alpha=.83$).

Media. *Lifetime exposure to predominately Black and predominantly White sitcoms* was measured by asking participants to indicate how often they watched a list of specific sitcoms in elementary school, high school, and currently. The lifetime exposure scale for sitcoms was calculated by weighting each life stage to be proportionate to the time spent in that stage in the creation of the measure (Riddle, 2010), so that elementary school was given the suggested weight of 0.5 (6/12 years), high school 0.33 (4/12 years), and current 0.17 (2/12 years). The specific sitcoms were selected using Nielsen data for the top 250 rated sitcoms since 1991, which

is the earliest for which Nielsen has ratings tracking. We selected the top 20 sitcoms for each of predominately Black casts and predominately White casts. However, the exposures to these titles for both types of sitcoms were generally low, making the measures skewed and kurtotic ($Black_{skew}=2.05$, $Black_{kurt}=6.44$, $White_{skew}=2.11$, $White_{kurt}=6.79$). The ladder function in Stata suggested the square root transformation was most appropriate for all measures. Skewness and kurtosis were not removed completely after the square root transformation, but they were much improved ($Black_{skew}=1.01$, $Black_{kurt}=3.08$, $White_{skew}=1.19$, $White_{kurt}=3.79$). It is the transformed data that were used in the analysis ($PBC, M=0.88, SD=0.73$, $PWC, M=0.97, SD=0.64$).

General lifetime television exposure was measured using Riddle's (2012) measure and weighted first by weekday (5 days out of 7, 0.71) vs. weekend (2 days out of 7, 0.29) within the time period, and then by time period as previously outlined ($M=4.68, SD=1.78$). This measure was used as a covariate signifying general television exposure.

Statistical Analysis

Regression coefficients reported are unstandardized. The model was a saturated path model in Stata 14.2, so there are no fit indices to report. Exposure to PBC and PWC sitcoms were the main exogenous variables associated with both positive and negative reciprocity, as well as positive and negative attitudes. Covariates were general lifetime television exposure and participant sex. Indirect effects were tested using the nlcom command and 5,000 bias corrected bootstrap samples. All exogenous variables were allowed to correlate, as were the error terms for positive and negative reciprocity, and error terms for the positive and negative attitude scales.

Study 2 Results

Full statistical results are reported in Table 1. Exposure to PBC sitcoms was significantly positively associated with expectations of positive reciprocity, while exposure to PWC sitcoms

was significantly negatively associated with expectations of positive reciprocity. Neither type of sitcom was significantly associated with expectations of negative reciprocity. Exposure to PBC sitcoms was not significantly associated directly with positive or negative attitudes, but exposure to PWC sitcoms was significantly associated with increased negative attitudes. Positive reciprocity significantly mediated the effects of both types of sitcoms in opposite directions; exposure to PBC sitcoms was associated with positive attitudes through increased positive reciprocity, $b=0.42$, 95% CI(0.17, 0.80), while exposure to PWC sitcoms was associated with less positive attitudes through decreased positive reciprocity, $b=-0.62$, 95% CI(-1.10, -0.31).

Study 2 Discussion

Exposure to PWC sitcoms was associated with less positive reciprocity expectations, and this was also associated with more negative attitudes. PBC sitcoms, on the other hand, were associated with more positive reciprocity expectations and therefore were also associated with more positive attitudes toward Black individuals. This is in line with the results found in the Study 1 content analysis that PBC sitcoms depicted more positive interracial reciprocity. There are some methodological limitations of Study 2 which hinder our ability to draw causal conclusions. Specifically, the cross-sectional nature of the survey means that we can only claim statistical associations between the measured variables, not causal relationships. Relatedly, covariates can be useful to help reduce the likelihood of spurious correlations. The present study included two covariates (gender, general TV use), although additional covariates, such as previous actual interracial contact, may further mitigate the possibility of this statistical issue. In addition, the retrospective nature of the exposure measures makes them fallible to memory failures and memory biases, including social desirability bias (e.g., to recall more exposure to

sitcoms with Black casts than is accurate). The validity of retrospective measures of media use has been previously demonstrated (e.g., Potts & Seger, 2013), but it is still retrospective and therefore limited in its utility. Finally, Study 2 was conducted with an undergraduate sample, which limits its generalizability. Study 3 employed an experimental design in an adult general population sample to attempt to ameliorate these concerns.

Study 3

Positive reciprocity was more common than negative reciprocity in the content analysis, and positive reciprocity expectations also mediated the relationship between exposure and attitudes in Study 2. Therefore, in Study 3, we experimentally manipulate positive reciprocity exposure. The use of an experiment will help establish causality more clearly, and also estimate the impact of a single episode with varying amount of reciprocity on attitudes. This provides a more direct test of the idea that participants will internalize the vicarious interracial reciprocity they are exposed to, which is what should happen according to the vicarious contact hypothesis (Joyce & Harwood, 2014). We expect participants to therefore adjust their reported expectations of reciprocity based on their exposure, and subsequently attitudes, accordingly:

H3: The participants who are exposed to higher levels of positive interracial reciprocity will report more positive reciprocity expectations compared to those who are exposed to lower levels of reciprocity.

H4: Expectations of reciprocity will mediate the relationship between positive reciprocity exposure and prejudiced attitudes, such that increased expectations of reciprocity according to exposure condition will be associated with reduced prejudice.

The results of Study 2 suggested that whether the sitcom cast is predominately Black (PBC) or White (PWC) may also play a role in expectations of reciprocity. In Study 2, lifetime

exposure to PBC sitcoms was associated with increased positive reciprocity expectations, while lifetime exposure to PWC sitcoms was associated with decreased positive reciprocity. The content analysis in Study 1 suggests that part of the reason for this might simply be the amount of positive interracial reciprocity depicted. Specifically, PBC shows included more instances of reciprocity (both positive and negative, with positive more numerous) than did PWC shows. It may be this frequency of instances, rather than anything more specific about the content, that is driving the effect of exposure on reciprocity. If this is the case, then it should only be the amount of reciprocity depicted that influences expectations of reciprocity, and racial composition of the cast should not moderate the relationship. However, it is possible that there is something that goes beyond frequency of reciprocity depictions that is also driving results – in which case cast racial makeup should show a different exposure-expectation relationship as it did in Study 2. Based on these competing possibilities we offer a non-directional research question:

RQ3: Will whether the sitcom cast is predominately Black or White moderate the effect of exposure to reciprocity on reciprocity expectations?

Study 3 Methods

Participants

Participants were 604 adults ($M_{\text{age}}=48.80$ years, $SD=16.21$) from the United States who were recruited through a survey panel run by Dynata. As in Study 2, only participants who self-identified as non-Hispanic White were included in analysis ($n=594$, 304 (52.41%) identified as female, 271 (46.72%) as male, 1 (0.17%) as non-binary, 2 (0.34%) preferred their own terminology, and 2 (0.34%) preferred not to disclose, $M_{\text{age}}=49.15$, $SD=16.10$).

Procedure

The procedures were designated exempt by the Institutional Review Board at [University]. Participants entered the survey and provided consent to participate. They answered a question about their racial and ethnic identity and viewed a test video for video and sound before watching the main stimulus episode. The study design was a 2 (cast race: predominately Black vs. predominately White) by 3 (positive reciprocity: none vs. low vs. high) between-subjects design with random assignment. Amount of positive reciprocity was operationalized by selecting episodes from the content analysis in Study 1 that included zero (no reciprocity), two (low reciprocity), or five (high reciprocity) instances of positive reciprocity. Zero, two, and five were selected to represent no, low, and high reciprocity because these were the amounts identified in the content analysis that were consistently available across PWC and PBC shows with enough shows to include more than one per condition. No other numbers of instances were able to be matched across condition. The shows were Fresh Prince of Bel Air (PBC), Sister, Sister (PBC), Evening Shade (PWC), and Boston Common (PWC). All four shows originally aired in the 1990s.³ Every show was represented within the reciprocity categories (zero, two, five). Participants were randomly assigned to watch an entire 20-25 minute episode of a single show. That episode was from either a show with a predominately Black cast (e.g., Sister Sister or Fresh Prince of Bel Air) or a predominately White cast (e.g., Evening Shade or Boston Common). Likewise, that episode of each show either depicted no interracial reciprocity, two instances of interracial reciprocity, or five instances of interracial reciprocity. So, for example,

³ Our content analysis from Study 1 was used to choose the shows for Study 3; these shows were the only ones from that content analysis that all provided episodes with 0, 2, and 5 interracial reciprocity instances. No other combinations of shows allowed us to vary the number of reciprocity instances with precision while still having the manipulation of Black and White casts and stimulus sampling of multiple shows within the Black/White categories. Therefore, the choice to use these shows was practical and necessary. Future research may wish to determine whether more current shows would have similar effects.

one participant might be randomly assigned to watch an episode of *Sister Sister* (Black cast condition) that depicted five reciprocity instances (high reciprocity condition). Another participant might be randomly assigned to watch an episode of *Boston Common* (White cast condition) that depicted two reciprocity instances (low reciprocity condition). After the episode, participants answered post test questions and were fully debriefed.

Measures

Expectations of reciprocity. The same measure from Study 2 was used in this study to measure expectations of reciprocity (scale from -5 [strongly disagree] to +5 [strongly agree]); positive ($M=2.03$, $SD=2.06$, Cronbach $\alpha=.88$), negative ($M=0.17$, $SD=2.60$, Cronbach $\alpha=.90$).

Positive and negative attitudes. The same measure from Study 2 was also used in this study to measure attitudes toward Black people (scale from -5 [strongly disagree] to +5 [strongly agree]); positive ($M=0.81$, $SD=1.86$, Cronbach $\alpha=.85$), negative ($M=-0.01$, $SD=2.00$, Cronbach $\alpha=.88$).

Statistical Analysis

Analyses were conducted first using OLS regression in Stata 14.0 to test the interaction between cast racial composition and reciprocity instances, and the interaction was probed using the margins postestimation command and graphed using the predxcon command. Then, a saturated path analysis was conducted using the gsem command to test the full model. The interaction between cast race and number of reciprocity instances, as well as their individual influences, were the exogenous variables in the model. Positive and negative expectations of reciprocity were simultaneous mediators, with positive and negative attitudes as the outcome variables. Error terms were allowed to correlate between positive and negative reciprocity and

between positive and negative attitudes. Conditional indirect effects were estimated using the PROCESS macro for SPSS and 5,000 bias-corrected bootstrap samples (Hayes, 2013).

Study 3 Results

There were no significant differences between shows within the Black vs. White cast condition on positive reciprocity, negative reciprocity, positive attitudes, or negative attitudes (all $p > .05$), and therefore show was collapsed within condition for analysis. There was not a significant interaction between cast racial composition and reciprocity instances on positive reciprocity, $b = -0.17$, $p = .40$, 95% CI(-0.58, 0.23). However, there was a significant interaction (see Figure 1) between cast racial composition and reciprocity instances on negative reciprocity expectations, $b = -0.62$, $p = .02$, 95% CI(-1.14, -0.10)⁴. Probing this significant interaction with the margins command suggests that there was a significant difference between exposure to a PBC sitcom compared to PWC when reciprocity was highest, $b = -0.76$, $p = .046$, 95% CI(-1.51, -0.02). There was not a significant difference for the zero reciprocity condition, $b = 0.47$, $p = .21$, 95% CI(-0.26, 1.20), nor for the moderate (two instances) reciprocity condition, $b = -0.15$, $p = .71$, 95% CI(-0.91, 0.62). The simple main effect of the reciprocity manipulation was not significant either when the cast was predominately Black, $b = -0.28$, $p = .14$, 95% CI(-0.66, 0.09), nor when the cast was predominately White, $b = 0.34$, $p = .07$, 95% CI(-0.02, 0.70).

⁴For conceptual clarity, the reciprocity manipulation is treated as a continuous predictor for this analysis. However, a version was also run where it was treated as a multicategorical variable in order to confirm the pattern of results. When this is the case, the interaction between cast racial composition and reciprocity instances is significant in predicting negative reciprocity expectations when comparing 5 reciprocity instances to 0 reciprocity instances, $b = -1.24$, $p = .02$, 95% CI(-2.28, -0.20), but not when comparing 2 reciprocity instances to 0 reciprocity instances, $b = -0.59$, $p = .27$, 95% CI(-1.64, 0.46). Given that the interpretation of these interactions leads to the same conclusions as when the continuous version is used (that there is a significant difference by cast racial composition when reciprocity is high, but not when reciprocity is low or zero, and there is no significant simple main effect of reciprocity in either cast racial composition condition), we report the more parsimonious – if less ideal for statistical assumptions – continuous version in the main text and use that version for the moderated mediation model and indirect effects testing.

The full statistical results of the saturated path model can be found in Table 2. Negative reciprocity expectations, which was the mediator significantly predicted by the hypothesized interaction of cast racial composition and reciprocity instances, was significantly positively associated with negative attitudes toward Black individuals. The conditional indirect effect of cast race on negative attitudes through the mediator of negative reciprocity expectations was significant when reciprocity instances was high, $b=-0.43$, 95% CI(-0.83, -0.01), but not when reciprocity instances was low, $b=-0.09$, 95% CI (-0.32, 0.16), nor when reciprocity instances was zero, $b=0.25$, 95% CI (-0.10, 0.61).

Study 3 Discussion

The results of this experiment support the idea that exposure to interracial reciprocity in a sitcom episode can influence expectations of reciprocity, and this influences attitudes toward Black individuals. In the case of the present study, the type of reciprocity expectations affected were expectations of negative reciprocity, whereas in the Study 2 survey, it was positive reciprocity expectations. The racial composition of the show cast was crucial, such that reciprocity expectations were influenced by exposure to reciprocity in opposite directions when the cast was predominately Black compared to when it was predominately White. Specifically, high amounts of reciprocity were associated with reduced negative reciprocity expectations when the cast was predominately Black but increased negative reciprocity expectations when the cast was predominately White. Combined with the findings from the previous studies, these results suggest that reciprocity expectations might be learned from viewing sitcoms that include interracial reciprocity behaviors – but likely only in certain contexts such as when the cast is predominately Black.

General Discussion

In this analysis, three studies assessed the relationship between sitcom exposure and attitudes toward Black people. Study 1 content analyzed 35 sitcoms, including those with PBC and PWC, for instances of positive and negative reciprocity between Black and White characters. It found reciprocity in general was more likely to occur in PBC shows compared to PWC shows, and that positive reciprocity was the most common form of reciprocity, at a ratio of approximately three to one for positive to negative reciprocity. Study 2 then found that self-reported exposure to sitcoms was associated with positive attitudes toward Blacks through the mediator of reciprocity expectations, and also looked separately at sitcoms with predominately Black (PBC) and predominately White (PWC) casts. Exposure to PWC sitcoms were associated with less positive attitudes, mediated by reduced expectations of positive reciprocity. PBC sitcoms, on the other hand, were associated with more positive attitudes, mediated by increased expectations of positive reciprocity. Finally, Study 3 extended the previous two studies by experimentally manipulating exposure to positive reciprocity in a PBC or a PWC show. Results suggested an interaction between cast racial composition and reciprocity, such that exposure to a PBC episode that included high positive reciprocity was associated with reduced expectations of negative reciprocity, and that was associated with reduced negative attitudes toward Black individuals.

Practically, the results of Studies 2 and 3 suggest that sitcoms with many prominent Black characters that are engaging in reciprocity behaviors may be influential for decreasing racist attitudes. Modeling reciprocity would require helping behaviors to occur multiple times between characters who identify as Black and characters who identify with a different racial or ethnic group – something that is unlikely in sitcoms that do not have prominent Black casts.

However, more research is needed to understand the specific contexts that create boundary conditions for these effects.

Limitations and Future Research

Although these three studies can tell us much about the relationships between the variables of interest, including some suggestion of causality, longitudinal studies might be necessary to more fully understand the nature of the relationships. Certainly, selective exposure processes (Knobloch-Westerwick, 2014) are likely, in which viewers with more positive attitudes toward Black individuals should also be more likely to watch sitcoms with predominately Black casts. Those same viewers also might be more likely to report remembering watching more of such sitcoms in Study 2 and could respond more positively to such content when presented it in the experiment. Consistent with Slater's (2007) reinforcing spirals model, we posit that the relationship is likely dynamic as past research has indicated that motivation to control racism and prior attitudes also influence how people watch and interpret race-relevant content with the interpretations serving to reinforce existing attitudes (Eno & Ewoldsen, 2010; Holt et al., 2017).

Most of the work on Bounded Generalized Reciprocity has been done in contexts where the participant has experienced the reciprocity first-hand, and then adjusts their expectations accordingly. Other approaches to vicarious learning through media make similar assumptions as we make here; for example, the parasocial contact hypothesis suggests that vicarious interaction through media influences outgroup attitudes in much the same way as real-life contact (Schiappa et al., 2005; 2006). The results of the present study do suggest that reciprocity expectations might influence our understanding how racist attitudes are developed and maintained through media,

but more work is needed to more firmly establish causal mechanisms and prevalence of interracial reciprocity outside of the sitcom context.

Interestingly, it was positive reciprocity that acted as the mediating mechanism in Study 2, and positive reciprocity was also more common than negative reciprocity in the content analysis (Study 1). Therefore, we manipulated positive reciprocity in Study 3. However, it was negative reciprocity expectations, not positive, that were influenced by this manipulation. It is unclear why the influence of positive and negative expectations of reciprocity were inconsistent between these studies. It is possible that it was a side-effect of the samples or the methodological approaches. Study 2 was correlational, while Study 3 was an experiment. It is possible that a single instance has more influence on negative perceptions, but over time and with repetition, positive perceptions are affected as well. Given the stereotype connecting Blacks in the United States includes violence (e.g., a type of punishment), depictions of positive reciprocity (rewarding behavior) may initially decrease perceptions of negative reciprocity prior to increasing expectations of positive reciprocity. Future research should look at this issue more closely to understand if there is something systematic that predicts when positive vs. negative expectations of reciprocity will be key.

Finally, our study was unable to consider the important influence of intersectionality (Crenshaw, 2017) in these dynamics; we did not include gender, social class, sexuality, disability, age, or any other identity category that intersects with racial identity. This was intended as an initial proof-of-concept for the existence of interracial reciprocity behaviors in sitcoms and the influence they may have on downstream beliefs and attitudes. However, we know that stereotypes of outgroups are intersectional, and this may influence expectations of reciprocity. For example, the Strong Black Woman archetype is depicted as selfless and

nurturing to a fault (Thomas et al., 2022); this could mean that Black women are more likely than Black men to be depicted as engaging in positive reciprocity. Future research should consider intersectional identities in these contexts.

Conclusion

The relationship between media exposure and racial attitudes is complicated, with many factors influencing the relationship in different directions. The present study situated sitcoms as a specific context with clear and distinct associations with attitudes toward Black people. Across these three studies, the results suggest that sitcoms with predominately Black casts that enhance expectations of interracial reciprocity, from real life individuals, could play a key role in reducing prejudice through media narratives and through real life exemplars as well.

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Table 1

Path Model Results for Study 2

	Positive Reciprocity		Negative Reciprocity		Positive Attitudes		Negative Attitudes	
	<i>b</i>	95% CI	<i>b</i>	95% CI	<i>b</i>	95% CI	<i>b</i>	95% CI
Sitcom exposure								
Predominately Black Casts	1.20	0.33, 2.07	0.11	-0.92, 1.15	0.03	-0.83, 0.90	-0.38	-1.05, 0.30
Predominately White Casts	-1.81	-2.81, -0.81	0.40	-0.80, 1.60	-0.23	-1.24, 0.78	0.85	0.06, 1.64
General TV exposure	0.09	-0.03, 0.20	0.09	-0.02, 0.25	0.07	-0.05, 0.18	0.04	-0.04, 0.12
Positive Reciprocity	--	--	--	--	0.35	0.23, 0.46	-0.15	-0.24, -0.06
Negative Reciprocity	--	--	--	--	-0.14	-0.24, -0.04	0.38	0.31, 0.46
Sex	0.29	-0.13, 0.72	-0.58	-1.08, -0.07	0.11	-0.53, 0.31	-0.33	-0.65, 0.00
<i>R</i> ²		.06		.04		.16		.37

Note. For ease of interpretation, coefficients significant at $p < .05$ are bolded.

Table 2

Path Model Results for Study 3

	Positive Reciprocity		Negative Reciprocity		Positive Attitudes		Negative Attitudes	
	<i>b</i>	95% CI	<i>b</i>	95% CI	<i>b</i>	95% CI	<i>b</i>	95% CI
Cast racial composition (1=pred. Black)	0.25	-0.27, 0.77	0.46	0.21, 1.13	-0.33	-0.74, 0.08	0.00	-0.35, 0.35
Reciprocity instances	0.10	-0.19, 0.38	0.34	-0.03, 0.70	0.02	-0.21, 0.24	0.15	-0.04, .34
[Interaction]	-0.17	-0.57, 0.24	-0.62	-1.14, -0.10	0.07	-0.25, 0.39	-0.10	-0.38, .17
Positive Reciprocity	--	--	--	--	0.46	0.39, 0.53	-0.12	-0.17, -0.06
Negative Reciprocity	--	--	--	--	0.02	-0.03, 0.07	0.57	0.52, 0.61

Notes. For ease of interpretation, coefficients significant at $p < .05$ are bolded. Equation-level R^2 is not available from command `gsem` in Stata.

Figure 1

Interaction between Cast racial Composition and Reciprocity Instances on Negative Reciprocity Expectations

