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# *Modern Family*'s influence on viewers' explicit attitudes toward same-sex marriage and implicit attitudes toward gay people

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## Abstract

Previous research found that people who oppose short-term mating orientation and associate homosexuality with promiscuity were most likely to oppose same-sex marriage. This study aimed to test three main hypotheses based on these assumptions and the Parasocial Contact Hypothesis. The Parasocial Contact Hypothesis assumes that prejudices against a social group can be eliminated by a relationship between a media consumer and a fictional personality which embodies a member of that social group on a television show. The tested hypotheses predicted that (H1) the depiction of a loyal gay couple on the television show *Modern Family* changed people's explicit beliefs that gay people are promiscuous and, hence, (H2) shifted their explicit attitude toward same-sex marriage from opposing to supporting and (H3) had an impact on their implicit attitudes toward gay people. This study addressed the first two hypotheses in an online survey asking participants to complete a questionnaire. The third hypothesis was tested in a sexuality implicit-association test (IAT) to evaluate potential implicit preferences for straight people compared to gay people.

The collected data provided significant support for all three hypotheses. Viewing *Modern Family* predicted peoples' beliefs regarding the promiscuity of gay people, peoples' explicit attitudes toward same-sex marriage, and peoples' implicit attitudes toward gay people. This study also uncovered unexpected findings. The Viewing Frequency of *Modern Family* does not linearly predict people's explicit beliefs that gay people are promiscuous, or their explicit attitude toward same-sex marriage, but instead

predicts these in a quadratic manner. Additionally, and unexpectedly, people who have a more favorable attitude towards casual sex were more likely to oppose same-sex marriage, and the stronger the Parasocial Interaction with the characters with Cam, Mitchel, and Jay is, the more likely viewers are to oppose same-sex marriage. Furthermore, this study found evidence that different kinds of information affect implicit versus explicit. In order to better understand the conditions under which circumstances Parasocial Contact is able to reduce prejudice, and what role homophily, viewing frequency, and authority support play, it is important to conduct further research.

# Dedication

I dedicate this thesis to my husband Jaime Stemler, for his unconditional support and constant encouragements.

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# Chapter I.

## Introduction

The United States Supreme Court declared same-sex marriage legal nationwide in June 2015. The decision was supported by 60% of U.S. adults in that same year. Since then, same-sex marriage support has grown from 35% in 1999 to 70% in 2021 (McCarthy, 2021) (see Figure 1). This change of explicit attitudes toward same-sex marriage during the last decades occurred at an unprecedented fast pace and more dramatically than public opinion on any other policy issue (Fetner, 2016; Rosenfeld, 2017). In comparison to explicit attitudes toward same-sex marriage, public opinion on the legality of abortion, for instance stayed almost constant over the last decades (Brenan, 2021) (see Figure 1). In 1999, 55% of Americans thought abortions should be legal under certain circumstances. Since then, the public opinion on the legality of abortion under certain circumstances decreased slightly to 48%. This comparison raises the question of why the public opinion on same-sex marriage changed so much faster than public opinion on other social issues.

The changing political stances of former U.S. President Barack Obama reflects the rapid shift in the public's opinion about same-sex marriage. In 2008, Obama stated that he did not favor same-sex marriage and that marriage should be between a man and a woman (Bowers, 2012), whereas four years later in 2012, he announced his support of same-sex marriage publicly. Obama did not need to fear losing votes as a result of him changing his opinion on same-sex marriage, as 69% of Democrats supported same-sex marriage in 2011, indicating an upwards trend (McCarthy, 2021).

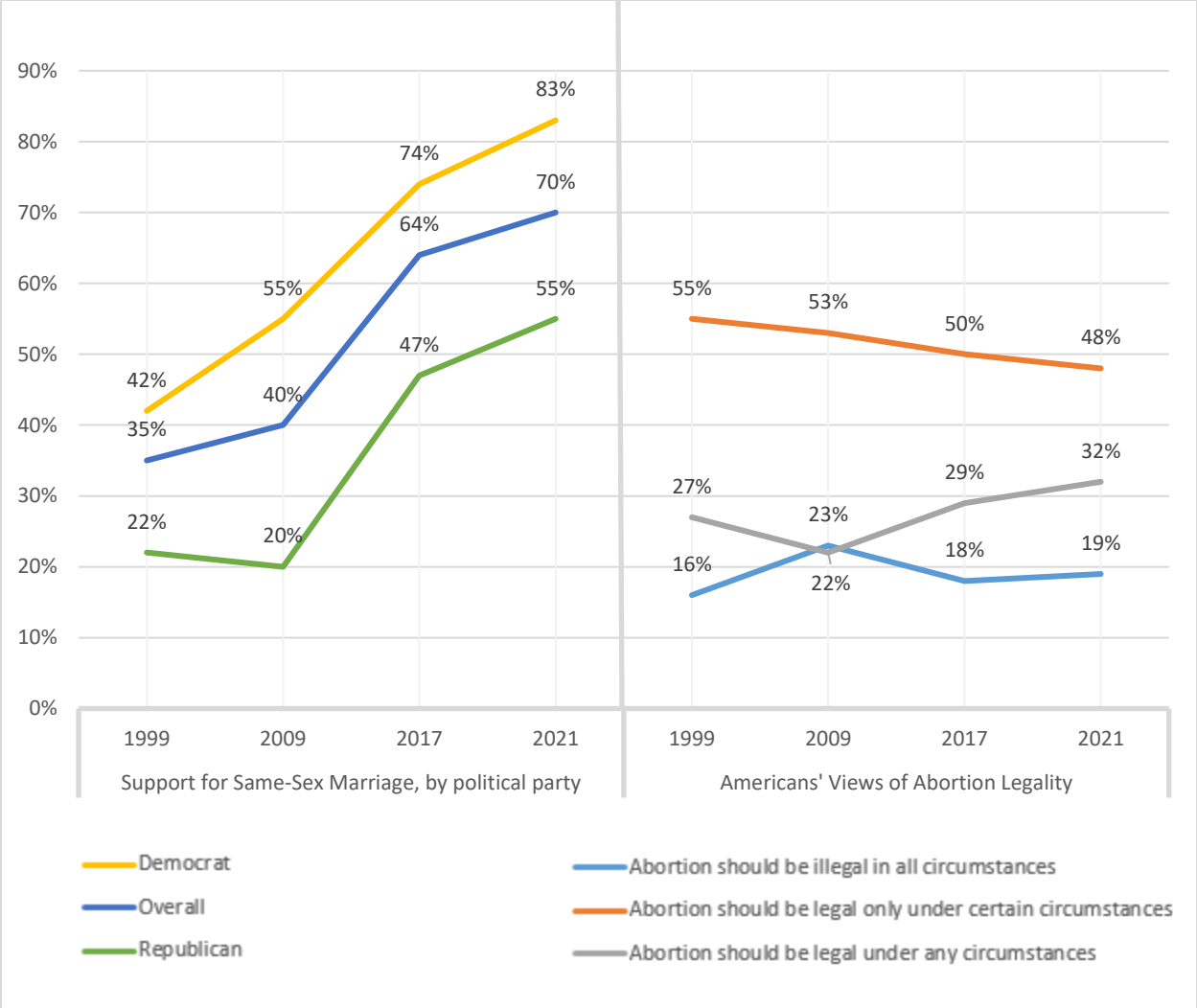



Figure 1. Percentage of People Who Believe Same-Sex Marriage Should Be Recognized by the Law as Valid & Americans' View of Abortion Legality.

*The data around the support for same-sex marriage are from Record-High 70% in U.S. Support Same-Sex Marriage, by McCarthy, 2021, (https://news.gallup.com/poll/350486/record-high-support-same-sex-marriage.aspx). Copyright 2021 by Gallup, Inc. The data for the american's views of abortion legality are from Record-High 47% in U.S. Think Abortion Is Morally Acceptable, by Brenan, 2021, (https://news.gallup.com/poll/350756/record-high-think-abortion-morally-acceptable.aspx). Copyright 2021 by Gallup, Inc.*

While support of same-sex marriage among Democrats grew continuously and almost linearly, Republican support of same-sex marriage stayed constant at around 20% between 1998 and 2009. According to Baunach (2012), who studied explicit attitudes toward same-sex marriage in the U.S. from 1988 until 2010, party affiliation became a predictor for opposing same-sex marriage starting in the 1980s when the Republican Party started positioning itself as a strong advocate for family values. Only after 2009 did an increasing number of Republicans start supporting same-sex marriage.

In 2016, the percentage of Republicans supporting same-sex marriage doubled and reached 40% (McCarthy, 2021). The rapid increase of support of same-sex marriage among Republicans was not caused by a generational shift but rather by individuals changing their opinion about the legality of same-sex marriage as well as their potential prejudicial explicit attitudes toward gay people (Baunach, 2012).

Democrats and Republicans changed their explicit attitudes toward same-sex marriage at a different pace due to their divergent explicit attitudes toward sexual promiscuity and their different mental associations between gay men and sexual promiscuity. People who oppose non-committal sexual relationships and who associate gay men with promiscuity were most likely to oppose same-sex marriage (Pinsof & Haselton, 2017). Republicans were more likely than Democrats to associate gay men with promiscuity (Lewis, 2011). According to the Parasocial Contact Hypothesis, people's explicit attitude toward a social group can change through repeated positive parasocial contact with a fictional television character portraying a member of that social group, especially when the opportunity for personal contact is limited (Schiappa et al., 2005). Pinsof and Haselton (2017) proposed that the changed portrayal of same-sex relationships

in the media, from sexually promiscuous to committed, family-oriented gay couples, increased acceptance of gay relationship.

People's attitudes toward an outgroup are divided into explicit attitudes — consciously endorsed beliefs which can be self-reported — and implicit attitudes — unconscious mental processes which are unknown to ourselves (Greenwald & Krieger, 2006). Implicit bias is a discriminatory cognitive distortion that is based on implicit attitudes (Greenwald & Krieger, 2006). On an individual level, implicit bias can vary significantly over weeks, but the implicit bias mean of a whole social group was assumed to be largely stable over decades (Payne et al., 2017). Despite the previously suggested stability of biases of a social group, Charlesworth and Banaji (2019) determined that implicit attitudes toward gay people have changed from 2007 to 2016 even though this change happened at a slower pace than the change in explicit attitudes toward gay people.

According to Ofosu and his colleagues (2019), both explicit as well as implicit prejudices against gay people decreased before the same sex ruling but even faster, at roughly double the rate, after the legalization. Charlesworth and Banajis' (2019) research confirmed that implicit attitudes can change at the population level. Charlesworth and Banaji (in press) identified that implicit attitudes toward gay people did not change at the same rate for liberals compared to conservatives. Their research showed that the shift in both attitude types - explicit and implicit - did not develop in parallel over decades for Democrats and Republicans. Charlesworth and Banaji (2019) concluded that the change in implicit attitudes toward gay people must have been caused by a changed sociocultural environment.

The television show *Modern Family*, which premiered in 2009, might be a reflection of the changed culture in the U.S. *Modern Family* is the first family sitcom in the U.S. to depict a male gay couple living and raising a child together. *Modern Family*'s portrayal of families is, contrary to its name, often conservative, which might be the reason why the show is popular among Republicans (Experian, 2010) who embrace traditional family values. Schiappa and colleagues (2006) found that the television show *Will & Grace* had a positive impact on viewers' explicit attitudes toward gay people which suggests that Parasocial Interaction can reduce prejudice against a social group. *Will & Grace* focuses on the social and dating lives of the successful gay lawyer, Will Truman, and his straight best friend Grace. In 2012, a thesis was made available which investigated the impact *Modern Family* had on explicit attitudes toward gay people and voting intentions for same-sex marriage legislation (Telios, 2012). Telios (2012) found a significant difference in intentions to vote in support of same-sex marriage legislation for viewers and non-viewers. However, when only looking at those who viewed *Modern Family*, the study did not find a linear relationship between viewers' levels of exposure to *Modern Family* and attitudes toward gay people or voting intentions.

This research continued the investigation into whether *Modern Family* and its novel portrayal of a faithful gay couple had an influence on viewers' explicit attitudes toward the legality of same-sex marriage. The study examined if something has changed since the legalization of same-sex marriage and the reasons why Telios (2012) potentially did not find a relationship between viewers' levels of exposure to *Modern Family* and attitudes toward gay people or voting intentions. The scope of this study went beyond looking at explicit attitudes to include implicit attitudes as well, as not much research has

been done on whether a television show in general can have an impact on people's implicit attitudes toward a social group. Consequently, this study included the question whether the television show *Modern Family* changed viewers' explicit attitudes toward same-sex marriage and implicit attitudes towards gay people.

## Opposition to Same-Sex Marriage

According to Pinsof and Haselton (2016), people opposed same-sex marriage out of self-interest as they believe same-sex marriage corrupts the institution of marriage. People who are less likely to pursue non-committal sexual relationships are more likely to oppose same-sex marriage (Pinsof & Haselton, 2016). Pinsof and Haselton (2016) hypothesized that women who condemn sexual promiscuity do it out of fear of abandonment if their goal is to have a large number of children at a young age. Furthermore, they hypothesized that men who oppose short-term mating orientation do it out of fear of cuckoldry and of having to spend time and resources supporting someone else's child. Pinsof and Haselton (2016) identified divergent mating strategies as an explanation why there is a political divide over the legality of same-sex marriage.

Republicans have more negative explicit attitudes toward casual sex than Democrats and, hence, oppose promiscuity and follow a more monogamous mating strategy than Democrats (Tybur & et al., 2015). Pinsof and Haselton (2016) concluded that people who oppose short-term mating orientation and associate gay men with promiscuity are most likely to oppose same-sex marriage. Consequently, if people reduce their prejudice against individuals with a short-term mating orientation or cease to believe in the prejudice that gay people are promiscuous, they might start supporting same-sex marriage.

## Shift in Explicit Attitudes Toward Gay People

Having a positive interaction with a gay man who rejects promiscuity might mitigate the stereotype that gay men are promiscuous. Individuals have to come out as gay to be identified as a member of the LGBTQ community and to enable the decrease in potential prejudices of people they have contact with. Rosenfeld (2017) hypothesized that the process of coming out of the closet, that is unique to gay people, is one explanation why American explicit attitudes toward same-sex marriage have undergone an unprecedented shift. He identified a sharp increase in the number of Americans reporting to have a gay friend during the 1990s, which he attributes to an increased number of gay people coming out of the closet during that time. In 2011, Gomillion and Giuliano (2011) conducted a mixed methods study asking LGBTQ community members what impact the increasing availability of LGBTQ role models in the media had on their coming out. The study results showed that more gay people felt encouraged to publicly identify as LGBTQ members. Especially, the coming out of entertainer Ellen DeGeneres in 1997 seemed to have an influence on participants' decisions to come out. Lewis (2011) showed that people who know gay people are significantly more likely so support same-sex marriage. If an increased number of gay people came out, more people would have knowingly had direct contact with a gay person.

According to Gordon Allport's (1954) Contact Hypothesis, people's explicit prejudices might vanish once they have positive personal contact with a member of a group towards which they hold negative prejudices. Their opinion about the whole social group can change by having personal contact with only one or more group members. The increasing personal contact between openly gay and straight people during the 1990s and

2000s could have potentially caused the growing support of same-sex marriage among Democrats but it seems it did not have the same impact on Republican support which stayed constant during that time period. One reason could be that Republicans know fewer gay people than Democrats (Lewis, 2011). However, the difference is only slight; according to Lewis (2011), between 1983 and 2005, 46% of Democrats reported to know an LGBTQ member in comparison to 43% of Republicans. Lewis (2011) concluded that having contact with openly gay people had a significantly larger effect on Democrats than on Republicans.

A reason why having personal contact with openly gay people did not have a big influence on Republicans' opinion about LGBTQ rights could be that the Contact Hypothesis is only effective under certain conditions. Dixon and colleagues (2005) argue that the common research practices testing the Contact Hypothesis limit the extent to which the theory can be applied as an explanation for social psychological change in the public's opinion. They disputed that personal contact can only decrease prejudice under certain conditions which often do not occur in real life. Allport (1954) defined the main conditions for the effectiveness of the Contact Hypothesis as having equal status (e.g. not a hierarchical relationship), working towards a common goal (e.g. players in a sport team), working together (e.g. coworkers collaborating on a project), and having support of institutional authorities, laws or society. Dixon and colleagues (2005) used various studies which tested the Contact Hypothesis to collect several more contact conditions which can help effectively reduce prejudices, such as contact frequency, in-group and outgroup balance, genuine acquaintance potential, free from anxiety, etc. After reviewing 515 studies that tested the Contact Hypothesis, Pettigrew and Tropp (2006) concluded

that not all contact conditions are essential in order to reduce explicit prejudice. Paluck and colleagues (2018) continued the review of existing intergroup contact studies and found that there is not enough research to determine under which conditions personal contact is most effective. However, in their study, Dyck and Pearson-Merkowitz (2014) found that support from authority is essential for personal contact to reduce explicit prejudices. The Republican Party's vigorous opposition against gay rights---and especially to the right to marry---which started in the 1980s (Baunach, 2012; Sherkat et al., 2011) potentially weakened or mitigated the effect suggested by the Contact Hypothesis on Republicans. Dyck and Pearson-Merkowitzs' (2014) study results showed that personal contact had a strong effect on Democrats but not on Republicans. If Republicans did not change their explicit attitudes toward same-sex marriage because of personal contact, they potentially changed their opinion because of a different medium.

Schiappa and his colleagues (2005) developed a communication analog to Allport's (1954) Contact Hypothesis, called the Parasocial Contact Hypothesis. Parasocial contact is a one-sided relationship between a media consumer and a fictional character on a television show. According to the Parasocial Contact Hypothesis, the same influence personal contact can have on prejudicial attitudes against a social group can also be created through repeated positive parasocial contact with a fictional television character portraying a member of the social group, especially when the opportunity for personal contact is limited. Parasocial contact with a member of a social group influences people's view of the entire social group, as television creates the illusion of personal contact through repetitive depiction of everyday life even if people are aware that the television characters are only fictional. Hence, the optimal conditions that the Contact

Hypothesis requires to effectively reduce explicit prejudices might be created through television shows.

The research of Bonds-Raacke and her colleagues (2007) support the theory that the positive portrayal of gay people on television can reduce explicit prejudices toward this social group. Their results showed that remembering a positive depiction of a gay character on television resulted in more positive explicit attitudes toward gay people compared to the effect that remembering a negative depiction of a gay character on television had on negative explicit attitudes. Bond (2020) also found that parasocial relationships with outgroup characters can reduce explicit prejudices against the outgroup. After watching the television show *Queer as Folk* over a ten-week period, the straight participants in Bond's study showed reduced explicit sexual prejudice. The study participants who scored the highest in the sexual prejudice measure pretest had the steepest decline in explicit prejudice. Bond also hypothesized that parasocial contact induces less intergroup anxiety than personal intergroup contact and, hence, can be more effective in improving outgroup attitudes. This could explain why Republicans, who have stronger sexual prejudice than Democrats, reduce their explicit prejudices more significantly than Democrats while watching *Modern Family*.

## Shift in Implicit Attitudes Toward Gay People

It has been duly substantiated that personal and parasocial contact can reduce explicit prejudices. However, there is only little research on whether personal and parasocial contact can reduce implicit bias. Early research even considered implicit bias as stable and not malleable once it has been established during early, mainly forgotten childhood experiences (Greenwald & Banaji, 1995; Baron & Banaji, 2006). Since then,

some studies haven illustrated short-term malleability through lab-based interventions. For example, Lai and colleagues (2016) showed that implicit bias interventions effectively reduced implicit preferences immediately after the end of the program, but none of the changes were persistent after a couple of hours or days. Lai and colleagues found that there are not many lab-based interventions focusing on the long-term malleability of implicit associations.

In a comprehensive study, Charlesworth and Banaji (2019) indicated that implicit bias can change long-term. They analyzed cross-sectional data aggregated from millions of participants collected over more than a decade on the Project Implicit website. Their findings showed that implicit sexuality attitudes had the greatest move to attitude neutrality from 2007 to 2016. As previous research suggested, Charlesworth and Banaji (2019) also propose that unknowingly having positive personal contact to gay people before they disclose their sexual orientation could potentially explain the rapid shift in sexuality attitudes. There is some research showing that personal contact can change implicit attitudes. For example, Phelan and colleagues (2017) found that implicit bias of medical students against sexual minorities was reduced by more frequent personal contact with LGBTQ faculty, residents, students, and patients during the participants' four-year medical studies. The result of Burke and colleagues' (2015) study showed that the amount and favorability of personal contact with lesbian women or gay men strongly predicted positive implicit attitudes among medical students. In addition, Aberson and colleagues (2004) found potential evidence that personal contact can reduce implicit prejudices. Their study showed that participants with interethnic friendships with African

Americans and Latinos had reduced implicit bias against these ethnic groups. It seems implicit bias depends on people's surroundings.

Hinton (2017) believes that implicit bias represents the culture in our mind. That means that the information we absorb automatically from our environment can influence neural networks and can create implicit bias. Hinton challenged the view that implicit prejudices are created within an individual and argues instead that implicit biases are the result of existing associations prevalent within its culture. Based on the idea that implicit bias does not reflect an attribute of a person but rather the person's culture and environment he is living in, Payne and colleagues (2017) developed "the bias of crowds" theory. Payne and colleagues (2017, p. 236) describe implicit bias as a social phenomenon that "passes through the minds of individuals." If culture is responsible for people's implicit bias, what has changed to trigger the shift in implicit attitudes toward gay people? As Charlesworth and Banaji (in press, p. 31) put it, research is "poised to identify which macro-level variables are at play". Hence, this study will look into what role media, in particular television shows, had in the shift of implicit attitudes toward gay people.

## The Impact of the Television Show *Modern Family* on Support of Same-Sex Marriage

With *Modern Family*, which premiered in 2009, a family sitcom depicts for the first time a male gay couple living and raising a child together. The depiction of a gay couple on television is significant as Barth and Parry (2009) found out that knowing a gay couple increases the likelihood of support for same-sex marriage legalization more than knowing gay individuals. *Modern Family* is popular among Republicans (Experian, 2010), who are 24% more likely to watch *Modern Family* than an average American

adult. As Republicans are more likely than Democrats to associate gay men with promiscuity and are less likely to have personal contact with an LGBTQ member (Lewis, 2011), *Modern Family* may have exposed some Republicans to a gay couple for the first time and might have been able to change their explicit and implicit attitudes toward gay men. *Modern Family*'s portrayal of families is, contrary to its name, often conservative, which might be the reason why the show is popular among Republicans embracing traditional family values.

*Modern Family* features Jay Pritchett, his son Mitchell Pritchett and his daughter Claire Dunphy, as well as their spouses and children. Jay represents the patriarch of the family, he is a Vietnam War veteran, lives with his second wife Gloria, who is from Colombia and is significantly younger than Jay, and with his stepson Manny. People opposing same-sex marriage might identify with Jay because he tries to overcome his former homophobic feelings and because he works on his relationship with his gay son Mitchell and his partner Cam, which he views as necessary due to the evolving environment. Some Republican viewers might see Jay as a fellow partisan; in an online fan poll a clear majority considers Jay to be a Republican ("Modern Family Wiki", 2021). If Jay is considered by Republican viewers as a fellow partisan, Allport's (1954) condition of authority support might be given as Dyck and Pearson-Merkowitz (2014) explain that contact is most effective when people feel that their explicit attitudes toward an outgroup is accepted by others in their social network.

Balancing the novelty of a gay couple on a family sitcom, the daughter Claire depicts a stereotypical housewife living with her husband Phil and raising their children Haley, Alex, and Luke. Especially in the first seasons, *Modern Family* seems to have

adopted a non-provocative nature in order to avoid deterring conservative viewership. For example, the gay couple, Cam and Mitchell, are rarely physically affectionate to each other, such as through kisses or hugs, compared to the other couples on the show. Furthermore, *Modern Family* portrays more conservative family values, as all children on *Modern Family* have loving parents in a stable relationship. Especially Mitchell and Cam show much affection towards their daughter. The gay characters are portrayed as a loyal and happy couple. Mitchell and Cam are never shown flirting or having inappropriate contact with any other gay men. In comparison, Claire's husband Phil is shown in several episodes flirting with other women and it becomes a running gag that Phil is attracted to Jay's wife Gloria. Consequently, there is no indication for the viewer to think that either Cam or Mitchell is promiscuous. The dissonance between the belief that gay men are promiscuous and the observation that the fictional gay couple Mitchell and Cam is a loving loyal couple might motivate viewers to reestablish cognitive consistency by remedy their potential held stereotype about gay people.

If an observation contradicts someone's beliefs or attitudes, the person feels motivated to restore cognitive consistency by changing his beliefs and attitudes (Rudman, 2004; Bond, 2020; Harmon-Jones & Mills, 2019). The results of Pinsof and Haseltons' (2017) experiment confirm that acceptance of same-sex marriage increases when people's belief that gay people are promiscuous is challenged. For their experiment, Pinsof and Haselton (2017) created two fictional articles. One article described fictional evidence that gay men are promiscuous, and the other article included fictional evidence that gay men are not promiscuous. Participants who read the article arguing that gay men and women are not promiscuous were more likely to support same-sex marriage

afterwards. The portrayal of gay men on television does not qualify as scientific evidence but, according to the Parasocial Contact Hypothesis, people still change their attitudes toward the displayed minority group by watching television shows, even if they know they are fictional. I predicted that the portrayal of Mitchell and Cam as family and not as promiscuous individuals could create the same effect as the fictional evidence in Pinsof and Haseltons' study that gay men are not promiscuous.

Furthermore, Bond (2020) proposed that participants in his study who had strong parasocial relationships with the gay characters significantly decreased their explicit sexual prejudice due to their need to reduce dissonance between their positive parasocial experience and their negative belief held against gay people. Following this hypothesis, if the viewer of *Modern Family* develops a positive parasocial relationship with Mitchell or Cam, similar to an in-person friendship, they might reduce their explicit and implicit prejudice against gay people and might change their opinion about the legality of same-sex marriage.

## Study Aim & Hypotheses

Based on the Parasocial Contact Hypothesis, watching the gay characters Cam and Mitchell as loyal to each other instead of promiscuous might have helped conservative viewers believe that gay men in general are not promiscuous and may have ushered more positive explicit and implicit attitudes toward same-sex marriage. Therefore, I hypothesized that, among people who associate homosexuality with promiscuity and oppose a short-term mating, the portrayal of a loyal gay couple on the television show *Modern Family* changed those viewers' explicit attitudes toward same-sex marriage from opposing to supporting. Consequently, I predicted that when people

who oppose same-sex marriage, associate homosexuality with promiscuity, and oppose a short-term mating orientation watch several episodes of *Modern Family,* they are more likely to support same-sex marriage afterwards. Furthermore, I investigated whether parasocial contact also mitigated implicit bias against gay people. Hence, I hypothesized that the depiction of a loyal gay couple on the television show *Modern Family* had an impact on viewers' implicit attitudes toward gay people.

To test these hypotheses, I conducted an online survey that followed the example of Schiappa and colleagues (2006) "Can One TV Show Make a Difference? Will & Grace and the Parasocial Contact Hypothesis". The online survey comprised questions about demographics, viewing frequency, short-term mating strategy, and parasocial interaction with the gay characters (see Appendix 2). Furthermore, questions about explicit associations between gay men and promiscuity and questions about explicit attitudes toward same-sex marriage were included. Following the instructions of Cui and his colleagues (2021), I built the sexuality IAT within the online survey software Qualtrics in order to minimize the drop-out rate. In comparison to older applications, the tool built by Cui and colleagues is mobile-compatible and, hence, participants were able to decide if they would like to complete the study on desktop or mobile, further reducing the drop-out rate. Participants were asked to complete the sexuality IAT in order to evaluate potential automatic preferences for straight relative to gay people.

This study aimed to test three main hypotheses:

H1: The depiction of a loyal gay couple on the television show *Modern Family* changed people's explicit believes that gay people are promiscuous.

H2: The depiction of a loyal gay couple on the television show *Modern Family* shifted viewers' explicit attitude toward same-sex marriage from opposing to supporting and

H3: The depiction of a loyal gay couple on the television show *Modern Family* had an impact on people's implicit attitudes toward gay people.

Furthermore, the study tried to find explanations for several more research questions. For example, the study adds to the research of the necessary conditions for parasocial contact to effectively reduce prejudices by analyzing whether *Modern Family* met the conditions of homophily, authority support, and repeated exposure over time. The discussion also covered the question if it is possible that viewers' prejudices even increase through attitudes polarization when the necessary parasocial contact conditions are not met. Additionally, the study analyzed the differences between the television shows *Will & Grace* and *Modern Family* and tried to find answers why there is a discrepancy between the effect of watching *Will & Grace* and *Modern Family* on viewers' attitudes toward gay people and same-sex marriage. The study also raised the question whether the reasons why people are more likely to oppose same-sex marriage might have changed since its legality.

## Significance of Study

If *Modern Family* has been a major factor for the rapid increase in support of same-sex marriage among Republicans since 2009, this might signal television creators and networks that their content could influence political and juridical matters. This might lead them to pay more attention to how they portray minorities and to the impact their portrayal of minorities has on the public's opinion. Furthermore, it is still unclear what

the necessary conditions are for parasocial contact to effectively reduce stereotypes. This study looked into how and to what extent parasocial contact has impact on explicit attitudes in real-life settings. This study will also explore when and how media can even increase prejudice; this is especially important for minorities who are more likely to be portrayed negatively. For example, Dixon and Linz (2000) have found that on local television news programming in Los Angeles and Orange counties, African Americans are more often presented as lawbreakers than Whites and Latinos compared to their respective crime rates.

A lot of research has been performed on the formation of implicit bias but only recently has research focused on the question of how implicit bias can be eliminated. For example, implicit bias awareness training is increasingly introduced in police agencies (Redfield, 2020), even though its effectiveness has not been scientifically proven. This study built towards a better understanding of whether television shows have an impact not only on people's explicit attitudes but also on people's implicit attitudes.

# Chapter II.

## Methods

In order to test the three hypotheses, this study relied on a correlational research design conducted online through Qualtrics. This study consisted of an online survey and an IAT, both hosted on Qualtrics. The study began after receiving the approval of the Harvard Committee on the Use of Human Subjects.

### Participants

According to G*Power statistical analysis with the assumption of a medium effect size $f^2$ of 0.15 with an alpha of 0.05, a power of 0.80, and five predictors, this study would ideally consist of at least 92 participants. The actual sample consisted of 289 participants who confirmed the screening questions that they are U.S. residents and that they are at least 18 years old and who answered at least the first two variable questions. The sample was recruited online to ensure a balanced age group ratio, gender ratio, and education level ratio. The recruitment also focused on onboarding a mix of Republicans and Democrats. The recruitment took place on online platforms such as Facebook, Reddit, YouTube, socialpsychology.org/expts.htm, etc. All participants had a chance to win one of five $20 gift cards.

## Measures

The study tested the hypotheses that the depiction of a loyal gay couple on the television show *Modern Family* (H1) changed people's explicit believes that gay people are promiscuous and hence (H2) shifted their explicit attitude toward same-sex marriage from opposing to supporting and (H3) had an impact on people's implicit attitudes toward gay people. The variables of the hypotheses are listed in table 1.

Table 1. Dependent and Independent Variables

| Variable Type | Hypothesis (H1) | Hypothesis (H2) | Hypothesis (H3) |
|---|---|---|---|
| Dependent Variable | Explicit associations between gay people and promiscuity | Explicit attitudes toward same-sex marriage | Score of sexuality IAT |
| Primary Independent Variable | Viewing frequency of *Modern Family* | | |
| Further potential Independent Variable | Short-term mating orientation | | |
| Further potential Independent Variable | Previous gay contact | | |
| Further potential Independent Variable | Party affiliation | | |
| Further potential Independent Variable | Parasocial interaction | | |

*All variables measured in the study are listed.*

*Explicit attitudes toward same-sex marriage*. Questions about explicit attitudes toward same-sex marriage were adopted from Pinsof and Haselton (2016; See Appendix 1). Participants rated the following statements using a 7-point Likert-type scale from 1

(strongly disagree) to 7 (strongly agree): “Marriage is between a man and a woman”, “Same-sex marriage undermines the meaning of the traditional family”, “I oppose the legalization of same-sex marriage”, and “I support a constitutional ban on same-sex marriage”. The last statement from Pinsof and Haselton (2016) was excluded as it is outdated: “Same-sex couples have the same legal rights to get married as heterosexual couples.”

*Implicit attitudes toward gay people.* Participants were asked to perform the sexuality IAT in order to assess their implicit attitudes toward gay people compared to straight people. Following the instructions of Cui and colleagues (2019), I built the sexuality IAT within the online survey software Qualtrics. Participants were asked to pair a stimuli (pictures representing gay or straight people) with either good (e.g. “Smiling”) or bad (e.g. “Horrific”) word categories. The time spent pairing the stimuli “gay” or “straight” with the two different attribute sets can reveal an implicit bias for gay or straight people (Greenwald et al., 2009).

*Explicit associations between gay men and promiscuity.* Questions about explicit associations between gay men and promiscuity were adapted from Pinsof and Haselton (2016; See Appendix 2). Pinsof and Haselton asked about attitudes towards gay men and women; this experiment will focus on the attitudes toward gay men only. Participants rated the following statements using a 7-point Likert-type scale from 1 (strongly disagree) to 7 (strongly agree): “Gay men tend to have more sexual partners throughout their lives than straight men”, “Gay men tend to have more casual sex (i.e., ‘one-night stands’) than straight men”, “In general, gay men tend to be less interested in lifelong,

romantic commitment than straight men", "In general, gay men tend to be less interested in settling down and getting married than straight men."

*Short-term mating orientation*. As short-term mating orientation might be an additional predictor, I included the measure in the survey. Therefore, following questions were also adopted from Pinsof and Haselton (2016; See Appendix 2). Participants rated the following statements using a 7-point Likert-type scale from 1 (strongly disagree) to 7 (strongly agree): "Sex without love is OK," "I can easily imagine myself being comfortable and enjoying 'casual sex' with different partners," "I could easily imagine myself enjoying one night of sex with someone I would never see again," and "I could enjoy sex with someone I find highly desirable even if that person does not have long-term potential."

*Parasocial Interaction*. Parasocial Interaction with the gay characters, Mitchell and Cam, and the family patriarch, Jay, were assessed with following two items adopted from Schiappa and colleagues (2006; See Appendix 2): "I would like to get to know a person like ____" and "___is like a real person to me". The score of Parasocial Interaction might have affected the influence of *Modern Family* on participants' explicit and implicit attitudes.

*Previous Gay Contact*. As previous literature has shown (Schiappa et al., 2006), parasocial contact can be more effective in changing people's attitudes toward gay people when no personal contact to gay people exists. Therefore, participants answered following questions from Schiappa and colleagues (2006) about previous gay contact (See Appendix 2). I will remove the distinguishing between gay, lesbian, and bisexual people and replace it with "gay men": 1 = "I do not know any gay men personally", 2 =

"I am acquainted with a few gay men, but not as friends", 3 = "I have a few [3 or less] gay friends or close co-workers", 4 = "I have more than 3 gay friends or close co-workers".

*Viewing frequency.* As Schiappa and colleagues (2006; See Appendix 2) conducted their study before streaming providers were available, I changed their viewing frequency question which asked how often participants had watched *Modern Family*. Instead, I asked participants how many episodes of *Modern Family* they have watched independent of the time period. The possible answers were: 1 = 0 episodes; 2 = 1-3 episodes; 3 = 4-11 episodes; 4 = 12-23 episodes; 5 = 24 episodes or more.

## Procedure

Recruited participants were able to access the online survey via a link redirecting them to the Qualtrics platform. Participants needed to first confirm they are U.S. residents and at least 18 years old. Furthermore, participants needed to confirm that they understood the provided information and details about the study. For participants who denied the screening questions, the survey was discontinued, and the participants were notified that they are not eligible to participate in the study. Participants who were eligible were then asked to complete the questions on explicit attitudes toward same-sex marriage, the questions on explicit associations between gay men and promiscuity, the short-term mating orientation scale, the Parasocial Interaction scale, questions on previous gay contact, and questions on Viewing Frequency. Furthermore, participants answered demographic questions about party affiliation, age, gender, sexual orientation, religious service attendance, and education level. Not only did participants complete the self-report measures, but they were also prompted with instructions for the sexuality IAT.

# Chapter III.

## Results

All analyses were conducted in SPSS 28.0.1.1. Within the sample of 289 participants, 79 (27%) were female, 145 (50%) were male, 16 (6%) were non-binary/ third gender, and 51 (18%) preferred not to or did not answer the question (see Appendix 1). The median age group of the sample was 25-34 years, with 48 participants (17%) in the 18-24 age group, 80 (28%) in the 25-34 age group, 79 (27%) in the 35-44 age group, 21 (7%) in the 45-54 age group, 11 (4%) in the 55-64 age group, 3 (1%) in the 65-74 age group, and 47 (16%) participants preferred not to or did not answer the question about their age. The sample was predominantly heterosexual, with 147 participants (51%) self-identifying as heterosexual, 38 (13%) as mostly heterosexual, 24 (8%) as bisexual, 17 (5%) as mostly homosexual, 7 (2%) as homosexual, 4 (1%) as asexual, and 55 (19%) participants preferred not to or did not answer the question about their sexual orientation. The majority of the sample had obtained at least a bachelor's degree, with three (1%) respondents self-reporting to have less than a high school diploma, 23 (8%) to have a high school diploma or an equivalent degree, 56 (19%) to have some college, but no degree, 86 (30%) to have a Bachelor's degree, 58 (20%) to have a Master's degree, 15 (5%) to have a Post-graduate degree, and 49 (17%) respondents preferred not to or did not answer the question about their education level. Asked about their religious service attendance, 7 (2%) participants replied to go more than once a week, 27 (9%) to go once a week, 49 (17%) to go once or twice a month, 62 (21%) to go a few times a year, 55

(19%) to go seldom, 35 (12%) to never go, and 61 (21%) participants preferred not to or did not answer the question how often they attend church aside from weddings and funerals.

The mean of explicit associations between homosexuality and promiscuity (EAHP) score was 4.12 (*SD* = 1.39) (see table 2). This value almost hits the midpoint of the scale. Participants with a score above four tended to agree with statements asserting a relationship between homosexuality and promiscuity. The mean of explicit attitudes toward same-sex marriage (EAS) score was 3.46 (*SD* = 1.81), which indicates that participants, on average, tended to support same-sex marriage. The mean IAT score was 0.31 (*SD* = 0.44) meaning that participants, on average, were faster to associate straight men with "good" attributes and gay men with "bad" attributes than straight men with "bad" attributes and gay men with "good" attributes. The value is just below the moderate break point (0.35) of psychological conventions for effect size.

Table 2. Mean Scores of Dependent Variables.

| | N | Mean Score | SD |
|---|---|---|---|
| EAHP | 243 | 4.12 | 1.39 |
| EAS | 323 | 3.46 | 1.81 |
| IAT Score | 197 | 0.31 | 0.44 |

*Mean Scores*

### Hypothesis 1: Quadratic Relationship Between EAHP and Viewing Frequency

To test the first hypothesis (H1) that the depiction of a loyal gay couple on the television show *Modern Family* changed people's explicit beliefs that gay people are promiscuous, a linear regression analysis was conducted to find a correlation between the variables Viewing Frequency and EAHP (explicit associations between homosexuality and promiscuity). The results revealed a non-significant linear trend between viewing frequency and EAHP, $R^2 = .004$, $F(1, 240) = 1.079$, $p = .300$. A visual inspection of the results (see Figure 2) indicated a potential non-linear trend which was confirmed by a quadratic regression showing, unexpectedly, that there was a statistically significant relationship between the independent variables Viewing Frequency and its square, Viewing Frequency$^2$, and the dependent variable EAHP, $R^2 = .152$, $F(2, 239) = 21.349$, $p < 0.001$. The total variance in EAHP explained by the model jumped to 15.20%. This analysis showed that EAHP first increases (see Figure 1) with the number of *Modern Family* episodes watched but decreases again for participants who watched more than two seasons, reaching the lowest point with a mean (*M*) of 3.24 and with a standard deviation (*SD*) of 1.60 for participants who have watched all episodes at least once. These results deviate from the study results from Schiappa and colleagues (2006) who found a linear trend caused by parasocial contact, showing that people who watched more often the television show *Will & Grace,* had more positive attitudes toward gay men.

We can assume that the majority of participants who answered that have not seen all episodes of *Modern Family* have stopped watching the show, and are not in the process of watching it, because on average they started watching *Modern Family* in 2016.

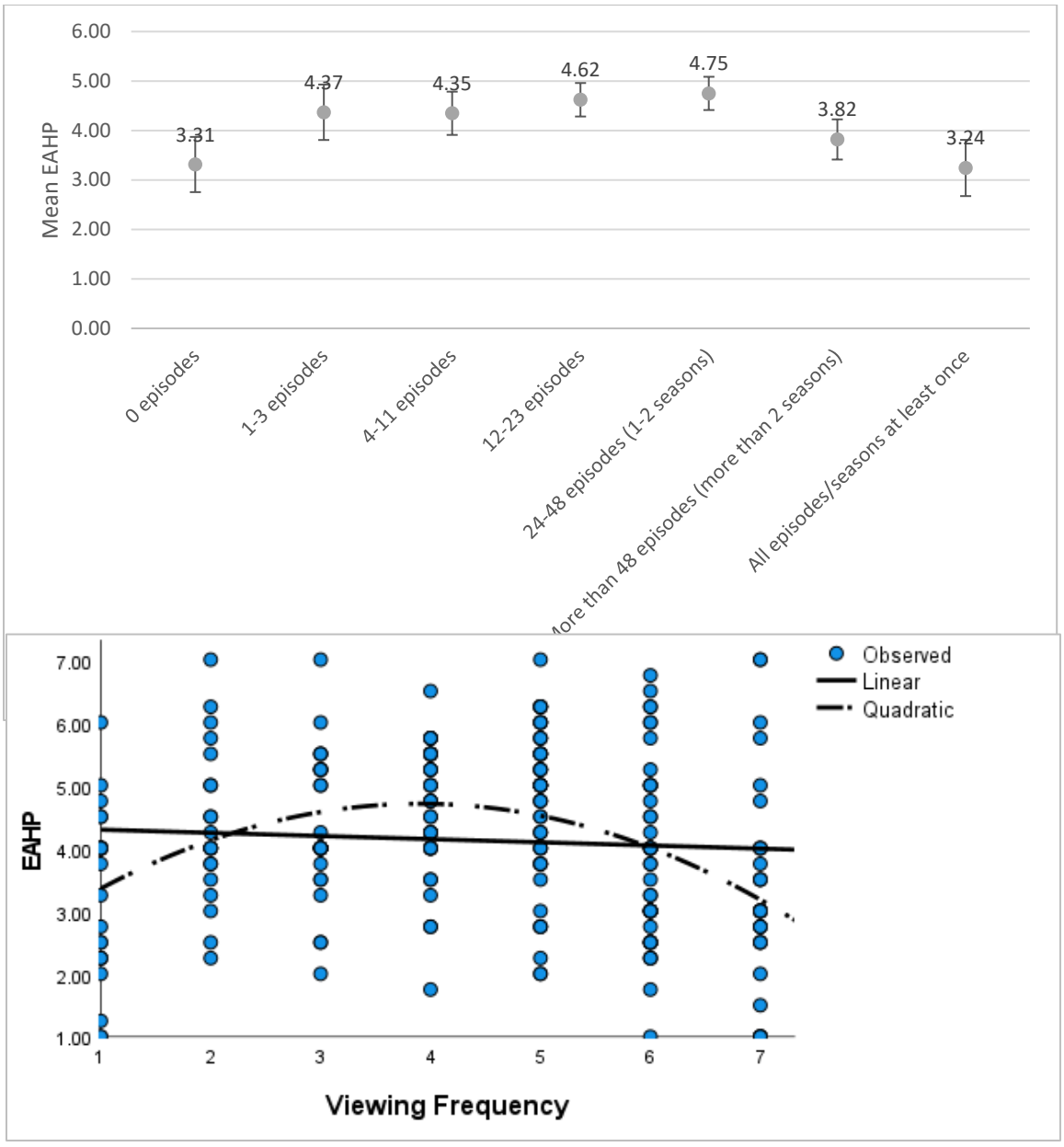



Figure 1. Simple Error Bar & Scatterplot– Mean EAHP x Viewing Frequency.

*Mean EAHP scores by number of episodes watched.*

STMO is a Predictor for Viewing Frequency

Quadratic regression revealed a statistically significant relationship between the independent variables STMO and its square, $STMO^2$, and the dependent variable Viewing Frequency, $R^2 = .074$, $F(2, 238) = 9.478$, $p < 0.001$ (see Figure 2). The total variance in Viewing Frequency explained by the model was 7.40%. The data suggests that participants with a high level of STMO (participants who are less averse to casual sex) tended to stop watching *Modern Family* after 24-48 episodes, whereas participants with a low level of STMO (participants who are more averse to casual sex) were more likely to watch *Modern Family* more than 48 episodes (see Figure 3).

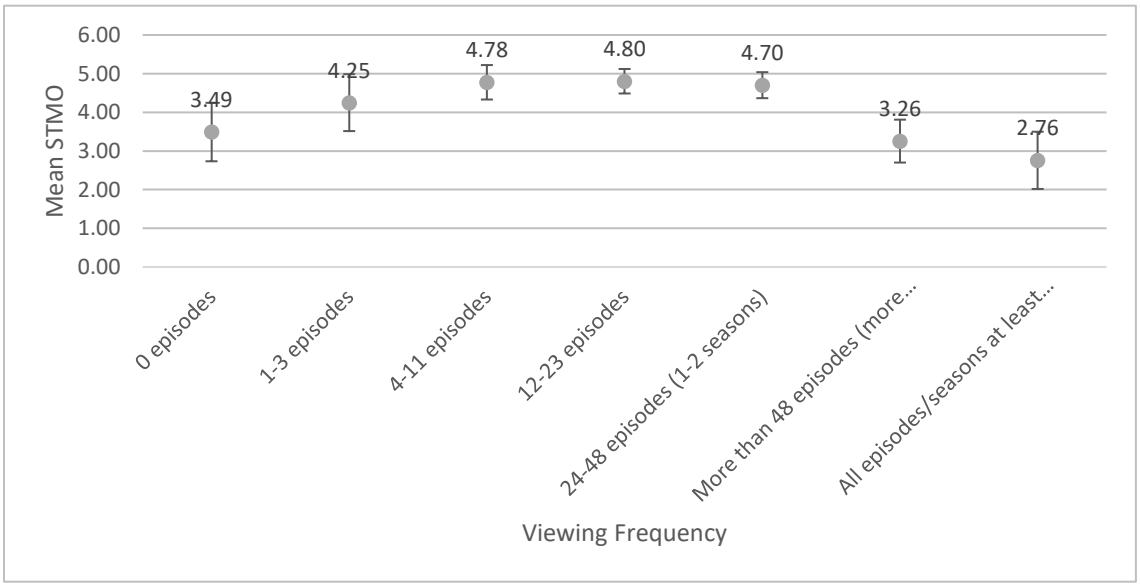



Figure 2. Simple Error Bar – Mean STMO x Viewing Frequency.

*Mean STMO scores per number of episodes watched.*

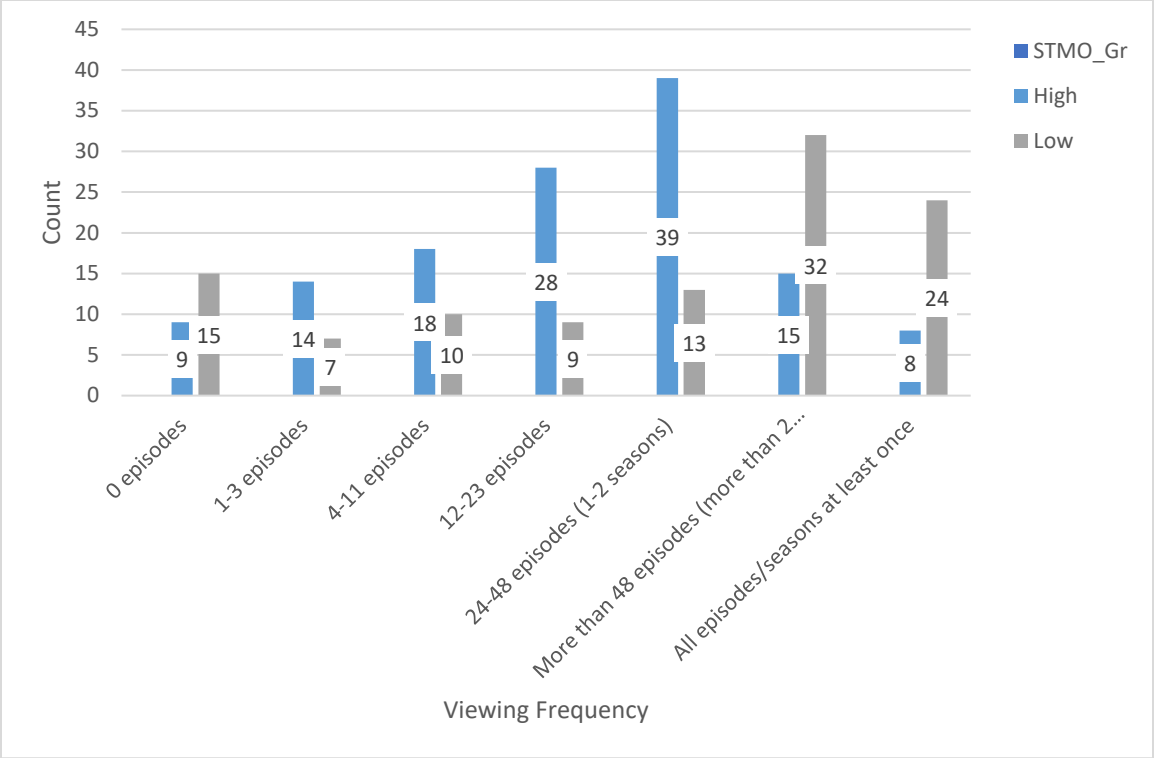



Figure 3. Bar Chart - Viewing Frequency by STMO Group.

*Viewing Frequency comparison of participants with high and low levels of STMO.*

STMO, Religion, and Education are Predictors for Viewing Frequency

A multiple linear regression was conducted to predict Viewing Frequency based on participants' STMO, religious service attendance, and education level. Together, the three predictors explained 11.4% of the variance ($R^2$ = .114, $F(3, 237) = 10.152$, $p <$ 0.001). As a visual inspection (see Figures 2&4) indicated a quadratic trend, the squares of STMO and religion were added as independent variables to explore the possible curvilinear relationships between both STMO and religion and STMO and Viewing Frequency. The analysis provided highly significant results between the independent variables STMO ($b$ = -1.22, $p < 0.001$), $STMO^2$ (b = .14, $p < 0.001$), religion ($b$ = 1.25, $p$

< 0.001), religion$^2$ ($b$ = -.17, $p$ < 0.001), and education ($b$ = 33, $p$ = 0.001) and the dependent variable Viewing Frequency, $R^2$ = .206, $F$(5, 235) = 12.172, $p$ < 0.001. The total variance in Viewing Frequency explained by the model increased to 20.06%.

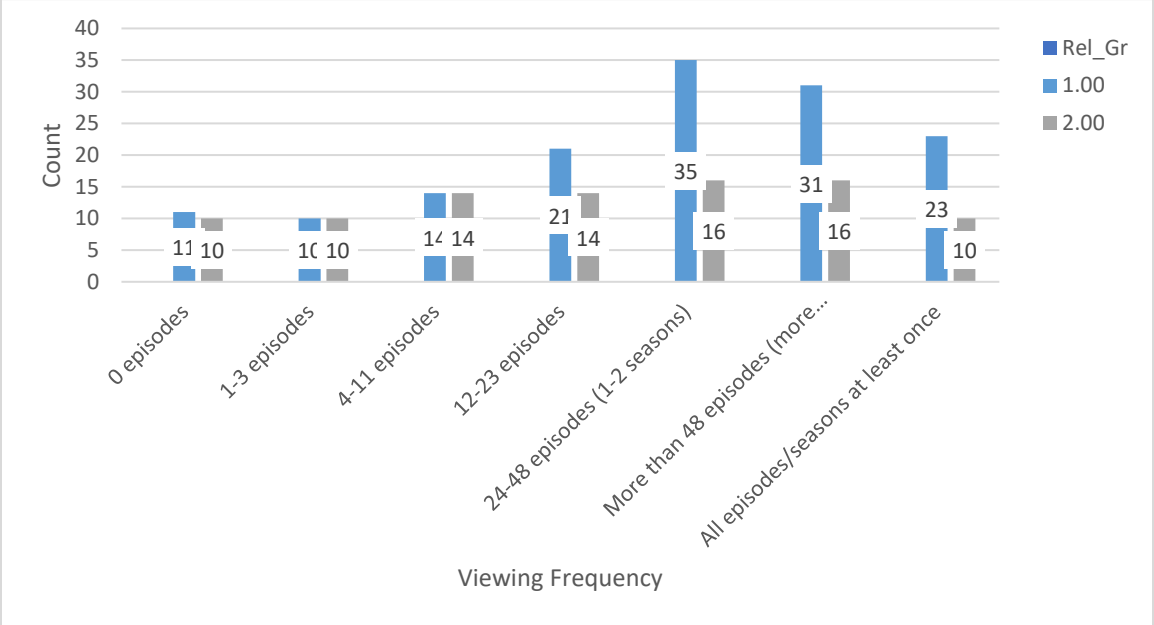



Figure 4. Bar Chart - Viewing Frequency by Religion Group.

*Viewing Frequency comparison of participants with frequent religious service attendances (Rel_Gr 1 < religious service attendances Mean) and with few religious service attendances (Rel_Gr 2 > religious service attendances Mean).*

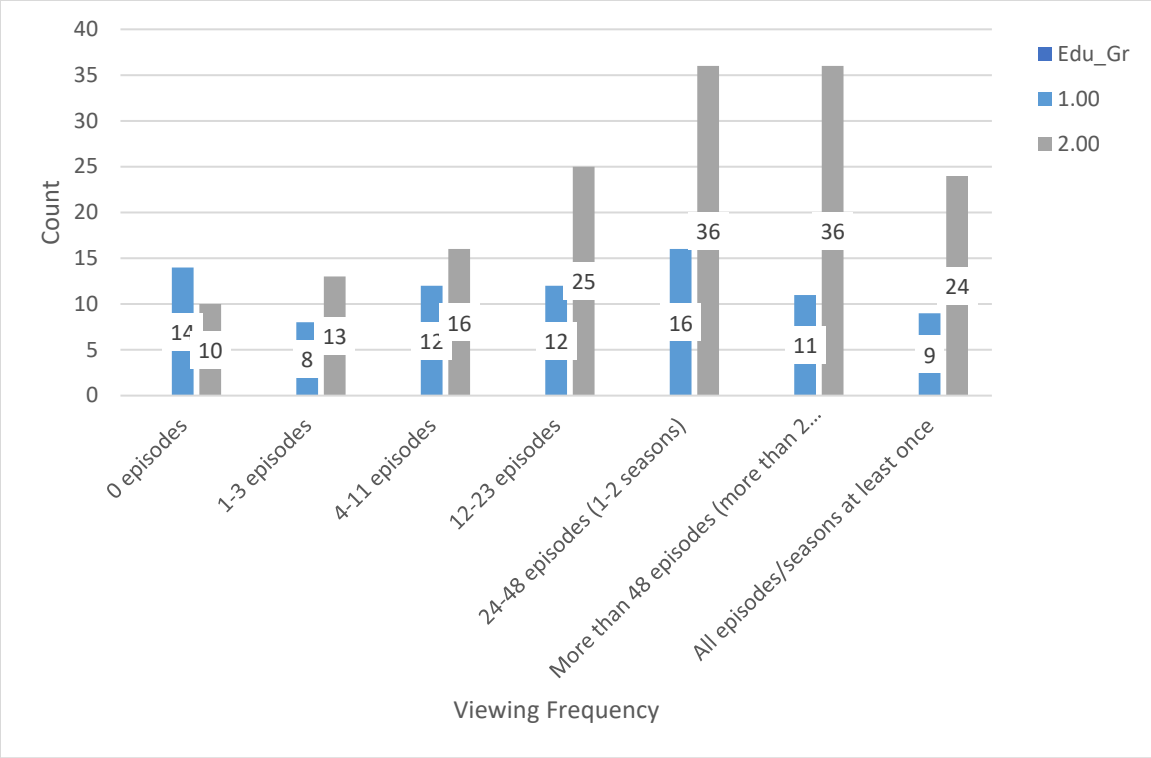



Figure 5. Bar Chart - Viewing Frequency by Education Group.

*Viewing Frequency comparison of participants with a low level of education (Edu_Gr 1 < education mean) and participants with a high level of education (Edu_Gr 2 > education mean).*

Hypothesis 2: Quadratic Relationship between EAS and Viewing Frequency

In order to test whether watching *Modern Family* shifted viewers' explicit attitude toward same-sex marriage from opposing to supporting (H2), a linear regression analysis between the variables Viewing Frequency and EAS was completed. The results showed a significant linear trend between Viewing Frequency and EAS, $R^2 = .018$, $F(1, 321) = 5.989$, $p = .015$. For this model, Viewing Frequency accounts for only 1.8% of the variability in EAS. In the same way as for the first hypothesis, a visual inspection of the results (see Figures 6&7) indicated a potential non-linear trend. This was confirmed by

the addition of the square of the variable Viewing Frequency because the second predictor improved the model and revealed a significant quadratic component. Combined, Viewing Frequency and Viewing Frequency$^2$ account for 12.0% of variability in EAS, $R^2 = .12$, $F(2, 320) = 21.856$, $p < 0.001$. Unexpectedly, this analysis showed that EAS first increased (see Figure 6) with the number of *Modern Family* episodes watched and decreased again for participants who watched at least 24 episodes, reaching the lowest point at $M = 2.32$ for participants who have watched all episodes at least once. Schiappa and colleagues (2006) found in their study that parasocial contact had the biggest influence on attitudes toward gay people for participants who had the least reported contact with gay people. In contrast, in the present study, the relationship between EAS and Viewing Frequency was only significant for participants who reported that they were acquainted with a few gay men, though not as friends.

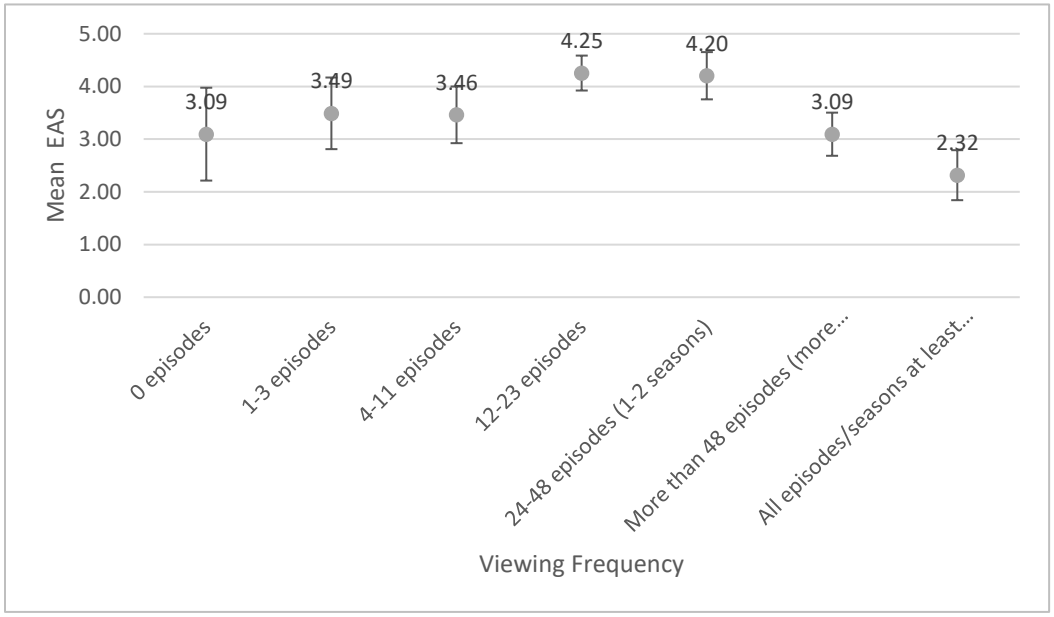


Figure 6. Simple Error Bar – Mean EAS x Viewing Frequency.

*Mean EAS scores per number of episodes watched.*

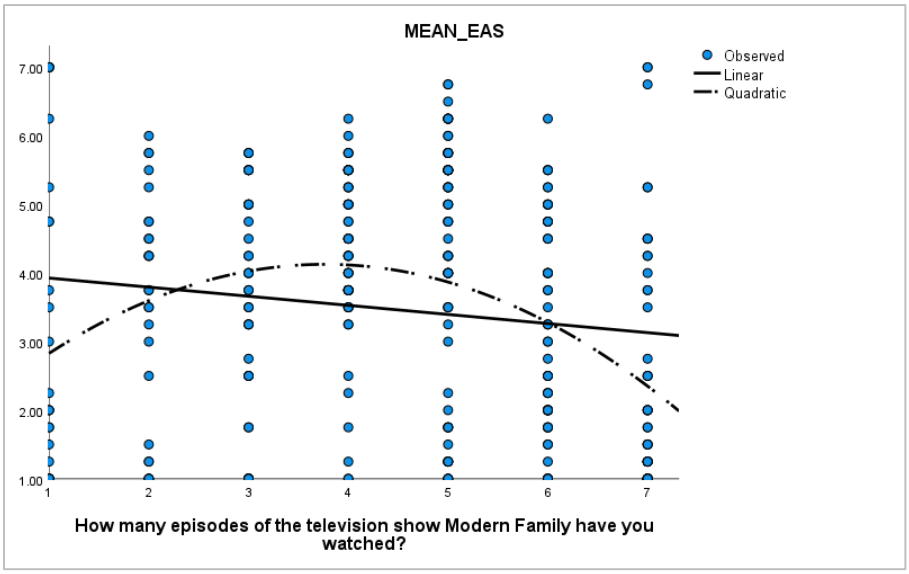



Figure 7. Scatterplot– Mean EAS x Viewing Frequency.

*Mean EAS scores per number of episodes watched.*

STMO Moderates the Relationship Between EAS and Viewing Frequency

In order to test whether the relationship between EAS and Viewing Frequency is moderated by STMO, we constructed a model testing whether the interaction of Viewing Frequency and STMO predicted EAS. It did, $b$ = 0.091, 95% CI [0.024, 0.159], $t$ = 2.658, $p$ = .008 (see Figure 8). However, STMO did not moderate the relationship between IAT and Viewing Frequency nor between EAHP and Viewing Frequency. When STMO is low (participants who are more averse to casual sex), there is a significant negative relationship between EAS and Viewing Frequency, $b$ = -0.166, 95% CI [-0.318,

-0.015], $t$ = -2.158, $p$ = .032. When STMO is high (participants who are less averse to casual sex), there is no significant linear relationship between EAS and Viewing Frequency, $b$ = 0.148, 95% CI [-0.045, 0.341], $t$ = 1.51, $p$ = .132. However, there is a quadratic trend. When only including cases with high STMO level, Viewing Frequency and Viewing Frequency$^2$ significantly predict EAS, $R^2$ = .169, $F(2, 128) = 13.004$, $p < 0.001$.

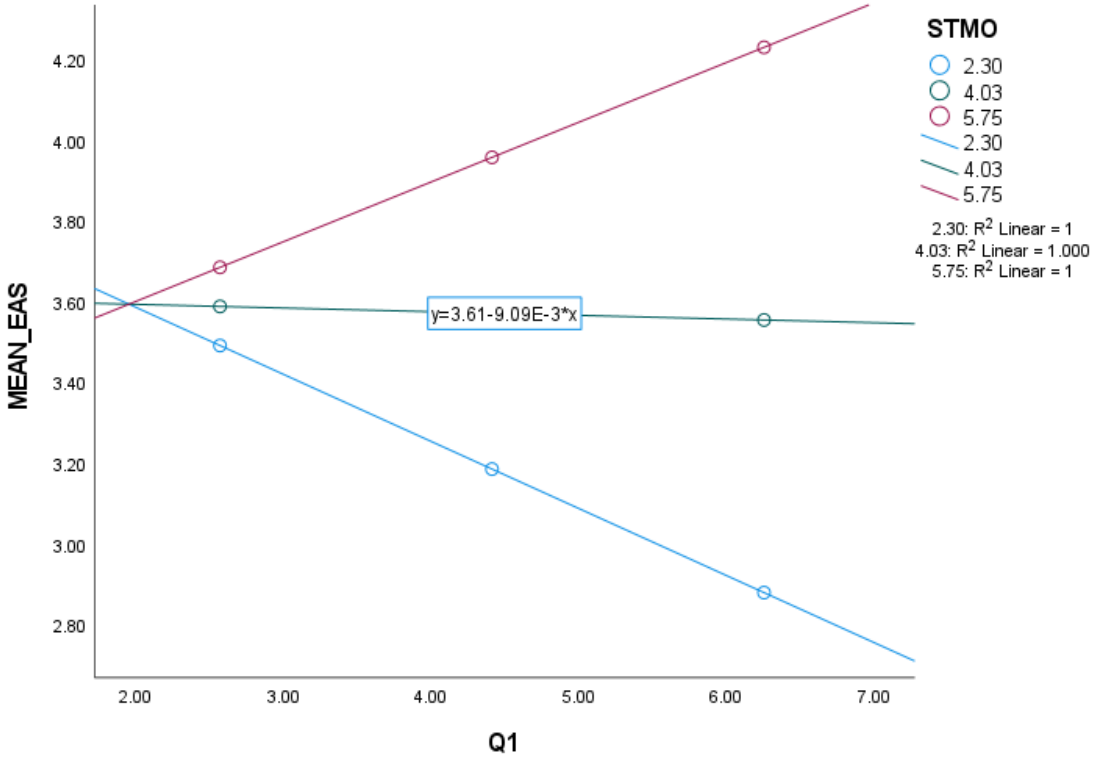



Figure 8. Line Plot – EAS x Viewing Frequency Moderated by STMO

*STMO 2.30 (-1SD), STMO 4.03 (Mean); STMO 5.75 (+1SD)*

EAHP Predicts EAS

EAHP did not predict IAT score. However, a linear regression showed that EAHP significantly predicted EAS, $R^2 = .375$, $F(1, 240) = 114.024$, $p < 0.001$. EAHP accounts for 37.5% of variability in EAS. The less people believe gay people are promiscuous, the less likely they are to oppose same-sex marriage.

STMO Positively Predicts EAS

Although Pinsof and colleagues (2016) found that people with lower STMO level (opposing a promiscuous lifestyle) are more likely to oppose same-sex marriage than individuals with high STMO level, this study shows the reverse that participants with higher STMO level were more likely to oppose same-sex marriage. A linear regression revealed a significant positive relationship between STMO and EAS, $R^2 = .062$, $F(1, 239) = 15.927$, $p < 0.001$.

Viewing vs Not Viewing Moderates the Relationship Between STMO & EAS

To test whether the relationship between EAS and STMO is moderated by the choice of viewing or not viewing, a linear regression tested whether the interaction of STMO and viewing predicted EAS. It did, $b = 0.0911$, 95% CI [0.024, 0.159], $t = 2.658$, $p = .008$ (see Figure 9). For participants who have not watched any episodes of *Modern Family*, their likelihood to support same-sex marriage increased with growing STMO level (being less averse to casual sex), $b = -.476$, 95% CI [-0.877, -0.075], $t = -2.34$, $p = .020$. For participants who have watched at least one episode of *Modern Family*, the likelihood to support same-sex marriage decreased with growing STMO level (being less averse to casual sex), $b = 0.348$, 95% CI [0.211, 0.485], $t = 5.00$, $p < .001$.

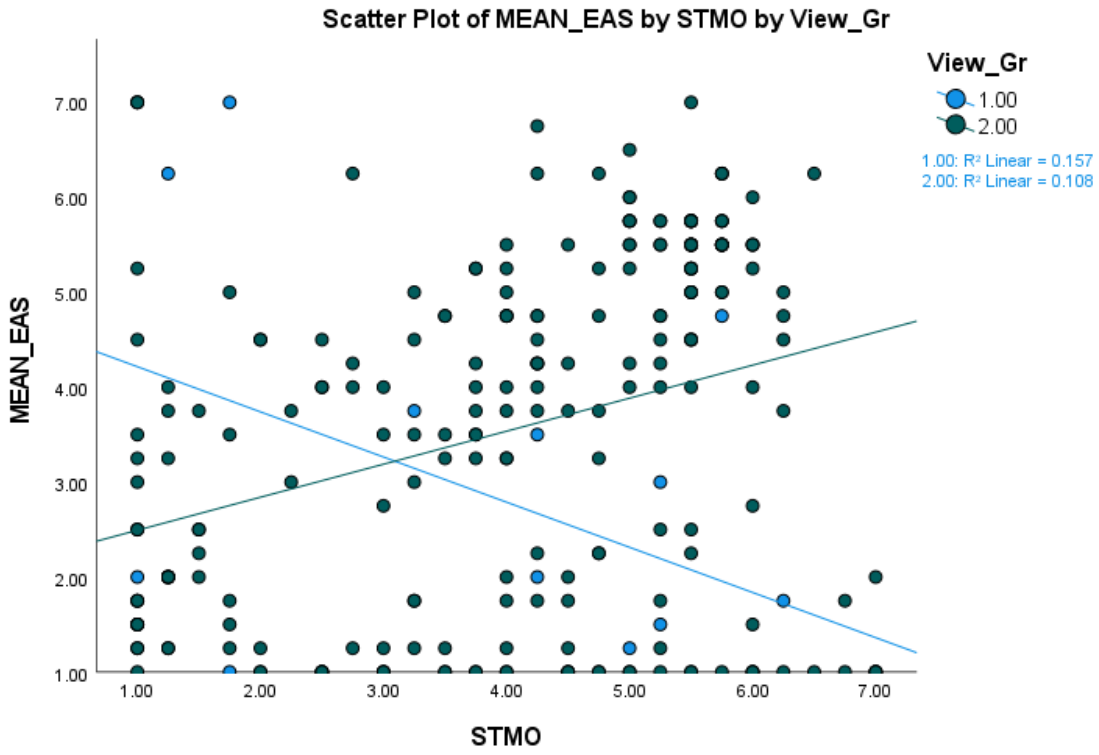



Figure 9. Scatterplot –EAS x STMO Moderated by Viewing Frequency

*Not watched any episode of Modern Family = View_GR 1; Have watched at least one episode of Modern Family = View_GR 2.*

Hypothesis 3: Linear Relationship between Implicit Attitudes and Viewing Frequency

To examine whether Viewing Frequency predicted implicit attitudes toward gay people, a linear regression was performed. The results showed that the greater the Viewing Frequency of *Modern Family*, the lower the level of implicit bias against gay men (see figure 10), $R^2 = .032$, $F(1, 194) = 6.417$, $p = 0.012$. Viewing Frequency accounted for 3.2% of variability in IAT score. Religious services attendance independently predicted both Viewing Frequency and implicit bias. Participants who attend church at least once or twice a month were more likely to watch all episodes of

*Modern Family* at least once than participants who attend church less frequently and have a slightly lower average IAT score. After accounting for religious service attendance, Viewing Frequency still significantly predicted the IAT score.

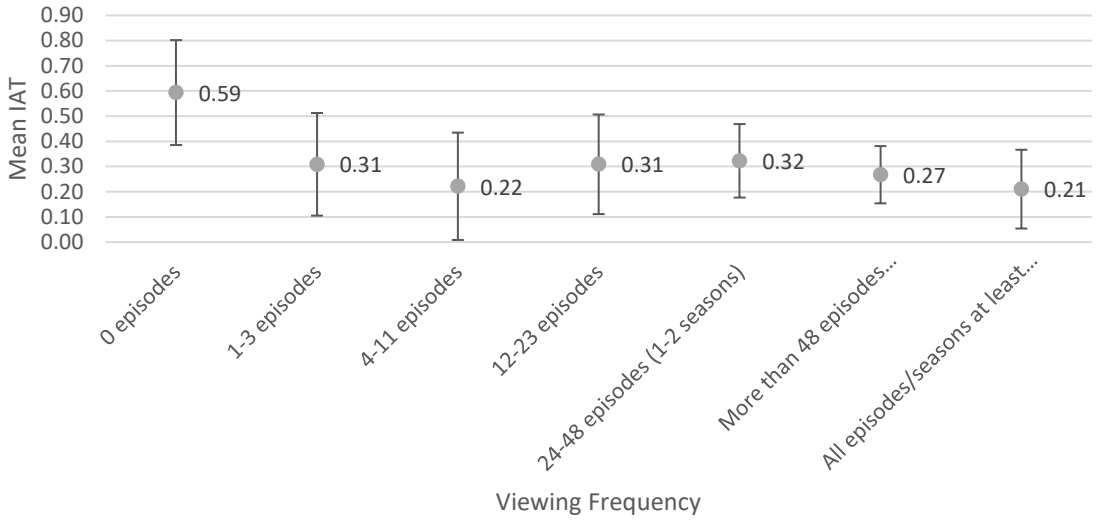



Figure 10. Simple Error Bar – Mean IAT x Viewing Frequency.

*Mean IAT scores by number of episodes watched.*

Correlation Between Implicit and Explicit Associations

The results of a linear regression showed that the greater the level of EAS, the greater the level of implicit bias against gay men, $R^2 = .031$, $F(1, 194) = 6.138$, $p = 0.014$. EAS accounts for 3.1% of variability in IAT score. Participants who were more likely to explicitly oppose same-sex marriage had on average a higher level of implicit bias against gay people than participants who were more likely to explicitly support same-sex marriage.

EAHP is a Moderator for the Relationship of IAT Score and EAS

To test whether the relationship between EAS and IAT score were moderated by EAHP, we asked whether EAS was predicted by the interaction between IAT and EAHP. It was, $b$ = -0.259, 95% CI [-0.048, -0.003], $t$ = -2.24, $p$ = .026. When EAHP is low (participants do not believe gay men are promiscuous), there was a highly significant positive relationship between EAS and IAT score, $b$ = 0.12, 95% CI [0.064, 0.171], $t$ = 4.33, $p$ < .001. 2. When EAHP is high (participants do believe gay men are promiscuous), there was no significant relationship between EAS and IAT score, $b$ = 0.04, 95% CI [-0.012, 0.094], $t$ = 1.54, $p$ = .125. The belief that gay men are promiscuous had an impact on EAS but not on IAT (see Figure 11). Therefore, there was no correlation between IAT and EAS when EAHP is high.

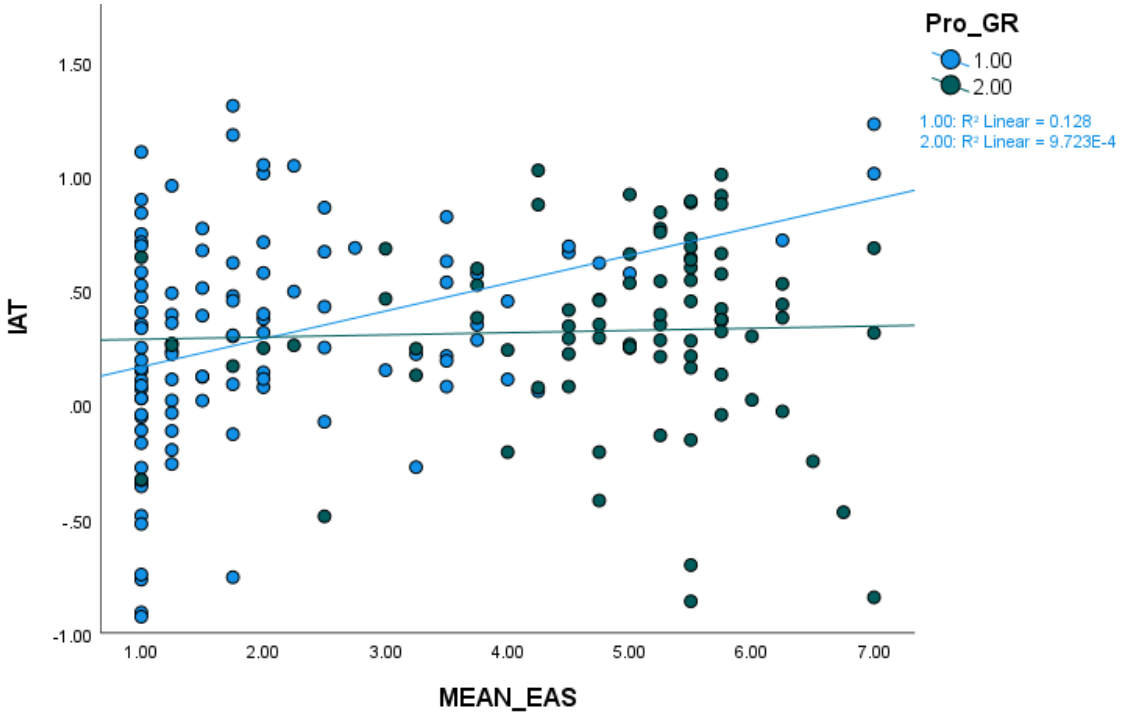


Figure 11. Scatterplot – IAT x EAS for EAHP low and high.

*Pro_GR 1 = Below EAHP Mean; High EAHP = Above EAHP Mean*

## Parasocial Interaction

### Parasocial Interaction (Cam, Mitchell, & Jay) x EAS

Linear regressions between EAS and Parasocial Interaction with Cam, between EAS and Parasocial Interaction with Mitchell, and between EAS and Parasocial Interaction with Jay showed unexpected evidence that people who had a higher Parasocial Interaction with Cam, Mitchel, or Jay were more likely to oppose same-sex marriage. In contrast, Schiappa et al. (2006) found that increased Parasocial Interaction with characters of the television *Will & Grace* were correlated with lower levels of sexual prejudice.

### EAHP Group is a Moderator for the Relationship of EAS & Parasocial Interaction with Cam, Mitchell, and Jay

The mean EAHP score was 4.12. An EAHP Group variable was created by grouping every participant with an EAHP score of up to 4.12 in group 1 and all participants with a higher EAHP score in group 2. EAHP Group significantly moderates the relationship between EAS and the Parasocial Interaction with Cam ($b$ = 0.608, 95% CI [0.314, 0.901, t = 4.087, $p$ < .001) (see Figure 12), the relationship between EAS and the Parasocial Interaction with Mitchell ($b$ = 0.132, 95% CI [0.035, 0.230], $t$ = 2.675, $p$ = .008), and the relationship between EAS and the Parasocial Interaction with Jay ($b$ = 0.410, 95% CI [0.097, 0.724, t = 2.581, $p$ = .011).

Participants who do not believe gay people are promiscuous (Low EHAP) were more likely to support same-sex marriage the stronger their parasocial relationship with Cam ($b$ = -.334, 95% CI [-0.536, -0.132], $t$ = -3.266, $p$ = .001) (see Figure 13) or Mitchell ($b$ = -.263, 95% CI [-0.447, -0.080], $t$ = -2.833, $p$ = .005). When EAHP is low (participants do not believe gay men are promiscuous), there was no significant relationship between EAS and Parasocial Interaction with Jay (see Figure 14), $b$ = 0.010, 95% CI [-0.208, 0.229], $t$ = 0.093, $p$ = .926. Participants who believe gay people are promiscuous (High EHAP) were more likely to oppose same-sex marriage the stronger their parasocial relationship with Cam ($b$ = .274, 95% CI [0.061, 0.487], $t$ = 2.536, $p$ = .012), Mitchell ($b$ = -.247, 95% CI [0.016, 0.478], $t$ = 2.104, $p$ = .037), or Jay ($b$ = .421, 95% CI [0.196, 0.645], $t$ = 3.694, $p$ < .001).

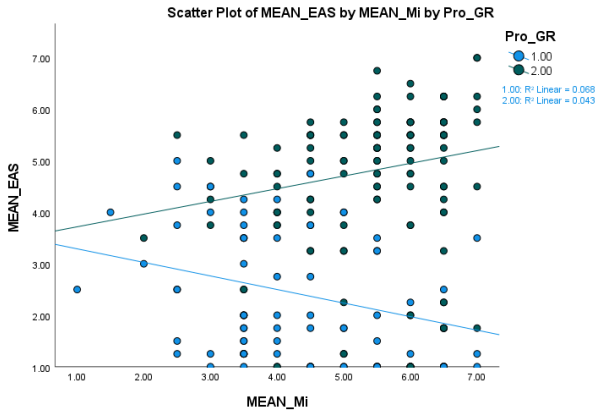



Figure 12. Scatterplot – EAS x Parasocial Interaction Mitchell moderated by EAHP Group.

*Pro_Gr 1 = Below EAHP Mean; Pro_Gr 2 = Above EAHP Mean.*

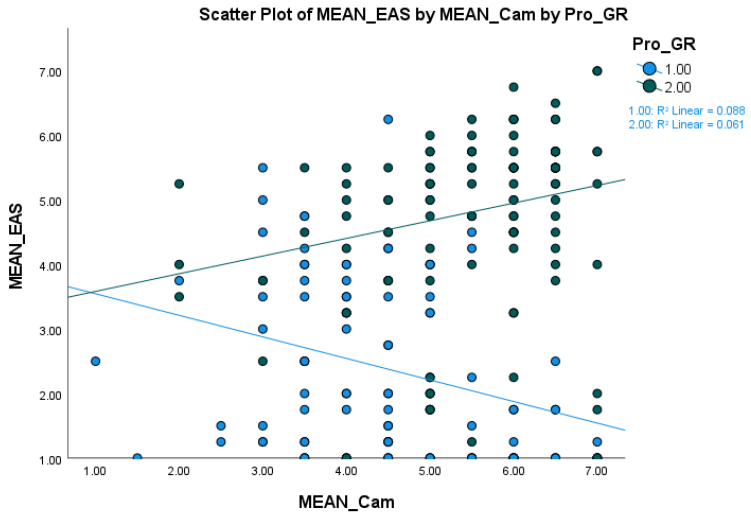



Figure 13. Scatterplot –EAS x Parasocial Interaction Cam moderated by EAHP Group.

*Pro_Gr 1 = Below EAHP Mean; Pro_Gr 2 = Above EAHP Mean.*

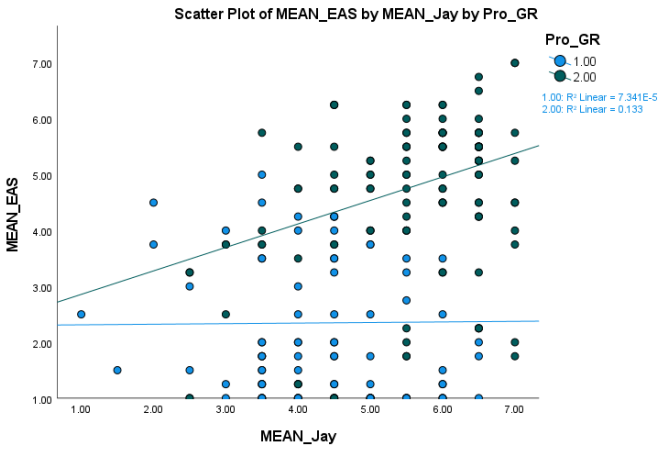



Figure 14. Scatterplot –EAS x Parasocial Interaction Jay moderated by EAHP Group.

*Pro_Gr 1 = Below EAHP Mean; Pro_Gr 2 = Above EAHP Mean.*

STMO and EAHP are Predictors for Parasocial Interaction with Jay, Mitch, and Cam

Three multiple regressions revealed that participants who had a high STMO and did believe gay people are promiscuous (High EAHP) were more likely to have a strong Parasocial Interaction with Jay ($R^2 = .235$, $F(2, 207) = 31.848$, $p < 0.001$), Mitchell ($R^2 = .134$, $F(2, 209) = 16.114$, $p < 0.001$), and Cam ($R^2 = .170$, $F(2, 209) = 21.366$, $p < 0.001$). However, participants with high STMO were also more likely to oppose same-sex marriage and stopped watching *Modern Family* sometime after having seen 24 episodes.

# Chapter IV.

## Discussion

This study investigated whether the portrayal of a loyal gay couple on the television show *Modern Family* (H1) changed those viewers' beliefs who considered gay people as promiscuous (EAHP) and, hence, (H2) changed their explicit attitudes toward same-sex marriage (EAS) from opposing to supporting. Furthermore, it aimed to find out whether watching *Modern Family* (H3) changed those viewers' implicit attitudes (IAT). The analyses of the collected data provided significant support for all three hypotheses. There was a significant difference in EAHP, EAS, and IAT between participants who watched *Modern Family* and those who did not.

Contrary to the expectation, the analysis showed a quadratic trend for the development of EAHP and EAS when an increased number of *Modern Family* episodes were watched. Only the IAT score decreased as anticipated in a linear way for participants who watched an increased number of *Modern Family* episodes. The data suggested that participants who are less averse to casual sex tend to stop watching *Modern Family* after 24-48 episodes, whereas participants who are more averse to casual sex are more likely to continue watching *Modern Family* after having consumed 48 episodes. Furthermore, people who attend church more regularly and have a higher level of education were also more likely to watch more episodes of *Modern Family* compared to participants who attend church less frequently and have a lower level of education. The data also revealed that STMO moderates the relationship between EAS and Viewing Frequency. When participants are more averse to casual sex, they are more likely to support same-sex marriage after having watched an increased number of *Modern Family*

episodes. For participants who are less averse to casual sex, there is no significant linear relationship but a quadratic relationship between EAS and Viewing Frequency.

In accordance with previous studies (Lane et al., 2007), this data also showed a positive correlation between IAT and EAS, meaning that participants who were more likely to explicitly oppose same-sex marriage also had on average a higher level of implicit bias against gay people than participants who were more likely to explicitly support same-sex marriage. The correlation between IAT and EAS is stronger when only looking at participants who do not believe gay people are promiscuous; $R^2$ increases from 0.031 to 0.128. In point of fact, EAHP is a significant predictor for EAS and not for IAT. The less people believe gay people are promiscuous, the less likely they are to oppose same-sex marriage. However, there is no significant difference in their IAT score.

Contrary to the findings of Pinsof and Haselton (2016), we observed a positive relationship between STMO and EAS, meaning that participants who are sexually less restricted are more likely to oppose same-sex marriage. However, the direction of the relationship between STMO and EAS changes depending on whether participants have watched at least one episode of *Modern Family* or none at all. Participants who have never watched Modern Family also exhibit a negative relationship between STMO and EAS, similar to the findings of the study of Pinsof and Haselton (2016).

Unexpectedly, we found that viewers who have a higher Parasocial Interaction with the characters Cam, Mitchel, or Jay are more likely to oppose same-sex marriage, contrary to the findings of Schiappa and his colleagues (2006) who found that increased Parasocial Interaction with characters of the television *Will & Grace* were correlated with lower levels of sexual prejudice. However, the relationship between EAS and the

Parasocial Interaction with these three characters is moderated by EAHP. Participants who do not believe gay people are promiscuous are more likely to support same-sex marriage the stronger their parasocial relationship with the gay characters Cam and Mitchell. Furthermore, STMO and EAHP are predictors for the Parasocial Interaction with Jay, Mitch, and Cam. Participants who are less averse to casual sex and do believe gay people are promiscuous are more likely to have a strong Parasocial Interaction with the three characters.

This study revealed several unexpected and interesting findings, some of which seem to contradict the existing literature at first glance and, hence, require further study. In the following, we discuss potential reasons why the relationship of EAHP and EAS with Viewing Frequency follows a quadratic trend, why STMO positively predicts EAS, why Parasocial Interaction negatively predicts EAS, and why the implicit and explicit attitudes develop in a non-parallel fashion. I propose the following explanations for the highlighted findings:

(1) The emergence of streaming providers changed viewing habits, and viewers might discontinue a television show at a later stage, causing the quadratic relationship between EAS and Viewing Frequency.

(2) Differences between the television shows *Will & Grace* and *Modern Family* explain the divergent trend curves of EAS and Viewing Frequency of the two television shows.

(3) The reasons why people are more likely to oppose same-sex marriage might have changed since it became legal.

(4) Homophily, a necessary condition for parasocial contact, might not have been present for viewers who have a favorable attitude towards promiscuity

(5) Repeated and sustained exposure, another necessary condition for parasocial contact, might have not been sufficiently met for viewers who stop watching *Modern Family* after having seen 12-48 episodes.

(6) Attitude polarization might explain the increased level of EAS and EAHP for participants with a high STMO level who stop watching *Modern Family* after having seen 12-48 episodes.

(7) *Modern Family* did not have the same impact on viewers' explicit attitudes toward same-sex marriage as it did on their implicit attitudes toward gay people.

EAHP & EAS Quadratic Development by Increasing Viewing Frequency

Based on Schiappa and his colleagues (2006), a linear relationship between the Viewing Frequency of *Modern Family* and the explicit attitudes toward same-sex marriage was anticipated. However, the analysis showed that explicit attitudes toward same-sex marriage (EAS) unexpectedly first increase with the number of *Modern Family* episodes watched and decrease again for participants who have watched at least 24 episodes, reaching the lowest point for participants who have watched all episodes at least once. Telios (2012), who also analyzed the explicit attitudes of *Modern Family* viewers, also found a linear relationship between viewers' levels of exposure to *Modern Family* with same-sex marriage voting intentions but did not identify a significant effect. Telios (2012) hypothesized the reason for the non-significant findings might have been a ceiling effect that people who decided to watch *Modern Family* already had strong

intentions to support same-sex marriage. However, it could be that a quadratic trend was undetected.

The data of this study also revealed that the explicit associations between homosexuality and promiscuity (EAHP) followed the same quadratic trend. The reason for the discrepancy between the findings could originate from various factors, one being the new possibilities for the consumption of television shows. Before streaming services were available, people usually had to wait one week until a next episode was aired. Nowadays, people have the possibility to watch as many episodes, as they want and to any time they want.

Schiappa and his colleagues (2006) conducted the survey in 2002, when the analyzed television show *Will & Grace* was aired once a week. Therefore, they asked their participants how frequently they watch *Will & Grace* with these answer options: 1 = Never; 2 = Every once in a while, about once every two months; 3 = Somewhat regularly, about once a month; 4 = Regularly, about twice a month; 5 = Every week or almost every week, I rarely miss an episode. Even though *Modern Family* has also been podcasted once a week by the channel ABC upon its premiere in 2009, since then, it has been available on different streaming platforms for daily consumption. Therefore, the measure of viewing frequency for this study has been updated to ask participants how many episodes of *Modern Family* they have watched independent of the time period. The possible answers were: 1 = 0 episodes; 2 = 1-3 episodes; 3 = 4-11 episodes; 4 = 12-23 episodes; 5 = 24 episodes or more. Potentially, the trend between Viewing Frequency and EAS would have been the same for Schiappa and colleagues' study back then if people

had the chance to stream *Will & Grace* on-demand instead of waiting every week for the next episode.

With the emergence of streaming services, the new viewing habit of binge-watching appeared. Binge-watching refers to consecutively watching several episodes of a television show (Pittman & Steiner, 2019). Pittman and Steiner (2019) identified the desire of completion amongst others as a reason for binge-watching. Potentially, the new phenomena of binge-watching causes people to discontinue a television show much later than they would have if the show had been aired on cable television once a week. Driven by the desire of completion, some viewers might continue streaming *Modern Family* in order to finish a season even if they actually do not enjoy the show, as much but they might have been less likely to continue watching *Modern Family* if they had had to wait one week for its continuation. As a result, the possibility of binge-watching could explain the trend differences of Viewing Frequency with EAS in this study compared to the one of Schiappa and colleagues (2006).

However, it is also possible that differences between the television shows *Will & Grace* and *Modern Family* explain the divergent trend curves of EAS and Viewing Frequency of the two television shows. Participants who are less averse to casual sex are more likely to stop watching *Modern Family* between 24-48 episodes, whereas participants who are more averse to casual sex are more likely to watch more than 48 episodes of *Modern Family* (see Figure 3). Potentially, people who have a favorable attitude towards a promiscuous lifestyle do not enjoy watching *Modern Family* as much as people who see casual sex more critically. Despite it being called “Modern” Family, the television show displays traditional monogamous relationships; all three main adult

relationships on the television show are portrayed as loving and loyal during all eleven seasons without any serious risk of a love affair, separation, or divorce shown. In comparison, *Will & Grace* covers topic such as dating, divorce, and casual sex among all four straight and gay main characters.

Not only were participants who are less averse to casual sex more likely to stop watching *Modern Family* between 12-48 episodes, but their EAS and EAHP scores were also the highest for these numbers of episodes watched. This increase can be attributed to the fact that STMO is positively correlated with EAS; the data of this study showed that participants with a higher STMO level are more likely to oppose same-sex marriage. Furthermore, the number of participants with a high STMO level is biggest for 12-48 episodes watched. Consequently, EAS levels are highest for participants who have watched between 12 and 48 episodes of *Modern Family*. But why does a high STMO level actually predict a higher likelihood to oppose of same-sex marriage?

## Why STMO Positively Predicts EAS

Previous research found evidence that opposition to same-sex marriage seems to be more prevalent among people who strongly support marriage as a social institution and are worried of a devaluation of that institution (Brumbaugh & et al., 2008; McVeigh & Maria-Elena, 2009). Pinsof and his colleagues (2016) hypothesized and found evidence that people who disapprove of a promiscuous lifestyle are more likely to oppose same-sex marriage. However, the findings of this study indicate a contrary trend that people who are ok with casual sex are more likely to oppose same-sex marriage. Nevertheless, looking at only participants who have not watched any episode of *Modern Family*, the data show the same trend found by Pinsof and his colleagues (2016).

Consequently, this means that the likelihood to support same-sex marriage decreases for participants who have watched at least one episode of *Modern Family* and have a high STMO level (being less averse to casual sex).

The research which provided evidence that people were more likely to oppose same-sex marriage out of anxiety that marriage would lose value in society by gay people marrying was conducted before same-sex marriage was legalized nationally in 2015 (Brumbaugh & et al; McVeigh & Maria-Elena, 2009). Since then Gallup estimates 904,000 same-sex marriages took place (Jones, 2022a). It is possible that people who were originally scared that the legalization of same-sex marriage would devalue the "institution" of marriage, did not feel that their fear became reality and perhaps even saw that gay people took marriage as seriously as they do. During a time when fewer U.S. Americans believe in the importance of marriage (Jones, 2022b), the celebration of same-sex marriages could almost be seen as an appreciation and a strengthening of the "institution" of marriage. Consequently, the reasons why people are more likely to oppose same-sex marriage might be different now. For example, Kaufman and Compton (2022) found in 2021 that fans of Donald J. Trump were associated with a significant higher likelihood to oppose same-sex marriage, providing a new factor for same-sex marriage opposition, even though it is unclear what actual position Trump has on same-sex marriage. This shows that the political and social environment, which is a crucial element for attitude formation, has changed since Pinsof and Haselton (2016) found an association between a high STMO level and a lower level of EAS.

Another reason why participants with a high STMO level do not decrease their EAS level after having watched between 12 and 48 episodes of *Modern Family* could be

that the conditions which have to occur in order for the Parasocial Interaction to effectively reduce prejudices might not have been met. The Parasocial Contact Hypothesis was derived from the Contact Hypothesis initially developed by Allport (1954) who named four main conditions which need to be present during intergroup encounters for contact to effectively reduce prejudice. The four conditions are equal status, shared common goals, intergroup cooperation, and authority support. However, in their review of intergroup contact studies, Paluck and colleagues (2019) concluded that there is not enough research to determine which conditions are with certainty most effective to reduce prejudice. Schiappa and his colleagues (2005 & 2006) pose the question in their articles as to which conditions need to be met in order for parasocial contact to effectively reduce prejudice. In their 2006 article, they claim that parasocial contact must be repeated or maintained over extended periods of time, the portrayal of the social group should be diverse, and the portrayed social group must be perceived as positive. According to Schiappa and his colleagues' 2005 article, a positive portrayal has occurred when participants have reacted to the portrayal of the characters with uncertainty reduction, social attraction, task attraction, physical attraction, or perceived homophily. Homophily has been found in several studies to be positively correlated to Parasocial Interaction (Schiappa & et al., 2007).

Critics of the contact hypothesis (Dixon & et al., 2005) have pointed out that the specific conditions under which personal interaction with a social group member can reduce prejudice against the social group often do not occur in real life settings. Possibly, the results of this study show an example where the conditions required for parasocial interaction to effectively change explicit attitudes have not been met for a set of

participants. Participants who have a favorable attitude towards casual sex might perhaps not perceive homophily with the gay characters or other main characters of *Modern Family.* If participants with a high STMO level live a promiscuous lifestyle themselves, they potentially feel the portrayed monogamous gay characters are not similar to themselves and, hence, a crucial condition for the parasocial contact hypothesis defined by Schiappa & colleagues (2006) was not met. Furthermore, participants with a high STMO level were most likely to stop watching *Modern Family* after having seen 12-48 episodes. Thus, possibly, the condition for repeated and sustained exposure was not sufficiently met. Schiappa and his colleagues (2006) even point out that when the specific conditions are not met, prejudices not only cannot decrease but they may even increase.

There are various studies supporting the Parasocial Contact Hypothesis (Bond, 2020; Bonds-Raacke et al., 2007; Schiappa et al., 2006), however, there are also some studies showing that parasocial exposure to a social group can lead to increased prejudice. For example, Gillig and Murphy (2016) conducted an experiment where the experimental group had to watch one video depicting the compilation of the development of a relationship between two gay adolescence characters on the television show *The Fosters* and they found that negative attitudes toward gay people increased significantly among heterosexual youth viewers. They concluded that the male heterosexual adolescents in their experiment did not have a sense of homophily with the portrayed gay characters and, hence, that the necessary conditions of the parasocial contact hypothesis were not met. Gillig and Murphy left the question open on what would happen if participants had watched the television show longer. Potentially, negative attitudes towards gay people might have decreased among the participants in their experiment in

the same way prejudices decreased among viewers of *Modern Family* after having seen at least two seasons. However, this study also showed that in real life settings, viewers have the option to discontinue a show when they do not identify with the characters, and they feel a cognitive dissonance between their beliefs and the content they watch.

If an observation contradicts someone's beliefs, the person feels motivated to restore cognitive consistency by changing either his beliefs or behavior (Rudman, 2004; Bond, 2020; Harmon-Jones & Mills, 2019). According to Harmon-Jones and Mills (2019), the decision to change beliefs or behavior depends on the extent of the effort the person needs to invest in order to obtain cognitive consistency. Participants with a high STMO level might have discontinued watching *Modern Family* as it meant less effort compared to changing and aligning their beliefs about same-sex marriage and the stereotype that gay people are promiscuous with the picture of a monogamous gay couple portrayed on *Modern Family*. Participants with a high STMO level were not only more likely to discontinue *Modern Family*, but they had an increased level of EAS and EAHP, potentially caused by attitude polarization.

Attitude polarization is a phenomenon in which attitudes are further strengthened by observing contracting evidence to its own believes (Lord et al., 1979). For example, Schmuck and her colleagues (2020) found that prejudice against Muslims further decreased among participants with positive attitudes about Muslims, after having consumed negative information about Muslism, Wojcieszak and Price (2010) encountered attitude polarization in their experiment when participants who strongly opposed same-sex marriage were faced with group members who disagreeing with them. These participants became further polarized in their opposition against same-sex

marriage. Perhaps such an attitude polarization took place for the high STMO participants in this study and, when faced with contradicting views, they strengthened their belief in EAHP and their opposition to same-sex marriage.

## Why is Parasocial Interaction Positively Correlated with EAS?

Not only was it unexpected that the EAS scores were the highest for participants who have seen between 12-48 episodes, but also that the EAS scores increased with an increasing Parasocial Interaction with Cam, Mitchel, and Jay. In contrast, Schiappa and his colleagues (2006) demonstrated that participants of their study showed lower levels of prejudice against gay people the stronger the Parasocial Interaction with the characters on the television show *Will & Grace* was. However, they also pointed out themselves that Parasocial Interaction will not always create the type of parasocial relationship that has the ability to decrease prejudice, even under optimal conditions. As outlined earlier, the optimal conditions for the Parasocial Contact to effectively reduce prejudices might not have been present for the viewers of *Modern Family*, e.g., homophily to the gay characters. Also, Bond (2020) concluded in his article that a strong parasocial relationship to a televised character is not enough but perceived similarity to the outgroup characters have to be present.

EAHP is a moderator for the relationship between EAS and the Parasocial Interaction with the gay characters, meaning that participants who do not believe gay people are promiscuous are more likely to support same-sex marriage the stronger their parasocial relationship with the gay characters Cam and Mitchell. Or, phrased the other way around, participants who believe gay people are promiscuous are more likely to

oppose same-sex marriage the stronger their parasocial relationship with the gay characters Cam and Mitchell.

Furthermore, STMO and EAHP are predictors for the Parasocial Interaction with Jay, Mitch, and Cam. Participants who less averse to casual sex and do believe gay people are promiscuous are more likely to have a strong parasocial interaction with the three characters. At the same time, participants with a high STMO level are also more likely to oppose same-sex marriage and to stop watching *Modern Family* sometime after having seen 24 episodes. Because STMO is positively associated with EAS and, at the same time, is also positively correlated with Parasocial Interaction with the characters, it might cause the relationship between Parasocial Interaction and EAS to be positive.

*Modern Family's* Impact on Republicans' EAS Compared to Democrats' EAS

It was hypothesized that *Modern Family* had a different impact on the explicit attitudes toward same-sex marriage of Republicans compared to Democrats as the character, Jay, might had been considered by Republican viewers as a fellow partisan, and therefore, the condition of authority support might had be given. However, Party Affiliation was not a significant moderator for the relationship of EAS and Viewing Frequency. Moreover, Parasocial Interaction with Jay does positively predict EAS, instead of negatively, and hence, it is unlikely that Jay functioned as authority regarding attitudes toward same-sex marriage. It might have been that Republicans who are supporters of Donald J. Trump did not feel the authority support from the fictional character Jay because in the real world Trump counted as a potential stronger authority figure.

## Differences Between Implicit and Explicit Attitude Changes

As anticipated, the findings of this study revealed a positive correlation between implicit bias against gay people and the explicit opposition of same-sex marriage. Nevertheless, it seems that the television show *Modern Family* did not have the same impact on the explicit attitudes toward same-sex marriage as it did on the implicit attitudes toward gay people. As Lane and colleagues (2007) point out, "even when the IAT and explicit measures do correlate, implicit and explicit attitudes are separate constructs" (p. 77). As discussed, EAS followed a quadratic trend as the numbers of episodes watched increased. This stands in contrast to the linear relationship between implicit attitudes and Viewing Frequency. The linear trend of implicit attitudes toward gay people might confirm the findings of Charlesworth and Banaji (2019) that implicit attitude change is not caused by individual forces but instead by marco-level influences. The results of this study might lead to the conclusion that the television show *Modern Family*, being an element of the marco-level of society, caused a change in implicit attitudes toward gay people. In contrast, the explicit attitudes of high STMO participants were affected by the homophily conflict.

As hypothesized earlier in the discussion, high STMO participants may not have identified with the monogamous gay couple on *Modern Family*, potentially explaining why they did not decrease their EAS level and potentially stopped watching *Modern Family*. This aligns with the findings of Charlesworth and Banaji (2019) that explicit attitudes are more susceptible to group-specific psychology motivations and drive stronger for cognitive consistency. Furthermore, this study showed that the belief that gay people are promiscuous is relevant for the explicit attitudes toward same sex marriage,

but does not have an impact on implicit attitudes toward gay people. This reinforces the conclusion of Rydell and his colleagues (2006) that implicit and explicit attitudes are changed based on different information and that it is possible that people can form inconsistent implicit and explicit attitudes about a subject.

## Limitations & Future Directions

While this study helps to clarify the circumstances under which parasocial contact can and cannot change peoples' explicit and implicit attitudes, the findings of this study have to be seen in light of some limitations. The first is the reliance on correlational data, which cannot prove with certainty the causal claim that *Modern Family* influences people's explicit attitudes toward same-sex marriage and implicit attitudes toward gay people. Initially, there was the concern that the correlation between Viewing Frequency and attitudes could be explained by the fact that *Modern Family* viewers choose to watch the show due to preexisting favorable attitudes toward gay men. However, this concern was eliminated by the finding of the quadratic trend of EAS and Viewing Frequency. In order to determine with more certainty that watching *Modern Family* influences people's explicit attitudes toward same-sex marriage and implicit attitudes toward gay people, a controlled experiment needs to be conducted. A controlled experiment in turn creates the problem that real-life settings cannot be fully constructed.

In the ideal design, a between-subject experiment with three groups would be conducted. In one group, participants would watch *Modern Family*, in the second group, participants would watch a television show which depicts gay people as promiscuous (e.g., *Queer as Folk*), and the third group would act as control group, with participants watching a television show which does not include any gay characters. The comparison

between the first and second group would give a better understanding of whether the way gay people are portrayed on television shows has an impact on viewers' attitudes toward same-sex marriage. However, such an experiment would be challenging to conduct, as participants who have not yet watched *Modern Family* and who are opposed to same-sex marriage would need to take part. The majority of U.S. residents now support same-sex marriage (McCarthy, 2021) and *Modern Family* is a popular television show among millions of U.S. viewers (Thorne, 2021), minimizing the participant pool of such an experiment.

The second limitation concerns the limited number of measures which were collected by the online survey. A challenge for all studies without monetary or other compensation is to recruit a sufficient number of participants to have large enough statistical power. In order to minimize dropouts during the online survey, I decided to exclude several measures, which could be added in future research. This study only tested participants' explicit but not implicit associations between gay men and promiscuity. Furthermore, this study focused on peoples' explicit attitudes toward same-sex marriage but did not probe their more general explicit attitudes toward gay men. The online survey also did not contain questions about viewers' attitudes toward the show and their opinion about the show's portrayal of gay men. Participants were neither asked to what extent they enjoyed watching *Modern Family* nor were they asked about their disgust sensitivity scale which is associated with anti-gay attitudes (Pinsof & Haselton, 2016).

The limitations of this study point toward topics future research should address. For example, the findings of this study raised the question if the motives of opposing same-sex marriage changed since its legality, as people who considered same-sex

marriage a threat to the "institution" of marriage encountered evidence to the contrary. Furthermore, future research should investigate how important the condition of homophily is for the effectiveness of parasocial contact to change explicit and implicit attitudes.

Appendix 1.

Sample Demographics

| Variable | N | Percent |
|---|---|---|
| Total | 289 | 100 |
| Gender | | |
| Female | 79 | 27.34 |
| Male | 145 | 50.17 |
| Non-binary/ third gender | 16 | 5.54 |
| Prefer not say | 51 | 17.65 |
| Age Group | | |
| 18-24 | 48 | 16.61 |
| 25-34 | 80 | 27.68 |
| 35-44 | 79 | 27.34 |
| 45-54 | 21 | 7.27 |
| 55-64 | 11 | 3.81 |
| 65-74 | 3 | 1.04 |

| | | |
|---|---|---|
| Did not answer | 47 | 16.26 |
| Political Affiliation | | |
| Strong Democrat | 45 | 15.57 |
| Weak Democrat | 44 | 15.22 |
| Independent Democrat | 49 | 16.96 |
| Independent/ Other | 46 | 15.92 |
| Independent Republican | 29 | 10.03 |
| Week Republican | 16 | 5.54 |
| Strong Republican | 11 | 3.81 |
| Did not answer | 49 | 16.96 |
| Sexual Orientation | | |
| Hetereosexual | 147 | 50.87 |
| Mostly Heterosexual | 38 | 13.15 |
| Bisexual | 24 | 8.30 |
| Mostly Homosexual | 17 | 5.88 |
| Homosexual | 7 | 2.42 |

| | | |
|---|---|---|
| Asexual | 4 | 1.38 |
| Prefer not say/ did not answer | 55 | 19.03 |
| Religious services attendance | | |
| More than once a week | 7 | 2.42 |
| Once a week | 27 | 9.34 |
| Once or twice a month | 49 | 16.96 |
| A few times a year | 62 | 21.45 |
| Seldom | 55 | 19.03 |
| Never | 35 | 12.11 |
| Prefer not to say/ did not answer | 61 | 21.11 |
| Education level | | |
| Less than a high school diploma | 3 | 1.04 |
| High school diploma or equivalent degree | 23 | 7.96 |
| Some college, but no degree | 56 | 19.38 |
| Bachelor's degree | 86 | 29.76 |
| Master's degree | 58 | 20.07 |

| | | |
|---|---|---|
| Post-graduate degree | 15 | 5.19 |
| Prefer not to say/ did not answer | 49 | 16.96 |

*Frequency Distributions*

Appendix 2.

Questionnaire

*Explicit attitutdes toward same-sex marriage.*

Instructions: Indicate the extent of your agreement or disagreement with the following statements about marriage (1 = strongly disagree, 7 = strongly agree).

1. Marriage is between a man and a woman.

2. Same-sex marriage undermines the meaning of the traditional family.

3. I oppose the legalization of same-sex marriage.

4. I support a constitutional ban on same-sex marriage.

*Explicit associations between gay men and promiscuity.*

Instructions: Indicate the extent of your agreement or disagreement with the following statements about gay men (1 = strongly disagree, 7 = strongly agree).

1. Gay men tend to have more sexual partners throughout their lives than straight men.

2. Gay men tend to have more casual sex (i.e., 'one-night stands') than straight men.

3. In general, gay men tend to be less interested in lifelong, romantic commitment than straight men.

4. In general, gay men tend to be less interested in settling down and getting married than straight men.

*Short-term mating orientation.*

Instructions: Indicate the extent of your agreement or disagreement with the following statements (1 = strongly disagree, 7 = strongly agree).

1. Sex without love is OK.

2. I can easily imagine myself being comfortable and enjoying ‘casual sex’ with different partners.

3. I could easily imagine myself enjoying one night of sex with someone I would never see again.

4. I could enjoy sex with someone I find highly desirable even if that person does not have long-term potential.

*Parasocial Interaction.*

Instructions: Indicate the extent of your agreement or disagreement with the following statements about the characters, Mitchell, Cam, and Jay (1 = strongly disagree, 7 = strongly agree).

1. I would like to get to know a person like Mitchell.

2. Mitchell is like a real person to me.

3. I would like to get to know a person like Cam.

4. Cam is like a real person to me.

5. I would like to get to know a person like Jay.

6. Jay is like a real person to me.

*Previous Gay Contact.*

Instructions: Indicate the extent of your agreement or disagreement with the following statements about your previous contact with gay men (1 = strongly disagree, 7 = strongly agree).

1. I do not know any gay men personally.

2. I am acquainted with a few gay men, but not as friends.

3. I have a few [3 or less] gay friends or close co-workers.

4. I have more than 3 gay friends or close co-workers.

*Viewing frequency*.

Instructions: How many episodes of the television show *Modern Family* have you watched?

1. 0 episodes.

2. 1-3 episodes.

3. 4-11 episodes.

4. 12-23 episodes.

5. 24 episodes or more.

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