

Ben-Gurion University of the Negev
The Faculty of Humanities and Social Science
Department of Psychology

**Changing Parents' Attributions about the Origins of their Children's
Sexual Orientation**

Thesis submitted in partial fulfillment of the requirements for the Masters of Arts
degree (MA)

Yael Belsky

Supervisor: Gary M. Diamond, Ph.D.

January 2013

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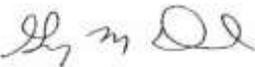
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Signature of chairperson
Of the committee for graduate students: _____ Date: 06.01.2013

January 2013

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INTRODUCTION

This study explored the types of causal attributions (essentialist vs. constructivist) held by non-fully accepting parents regarding their gay offsprings' homosexual orientation and whether a shift in attributions from constructivist to essentialist is possible. The majority of data on attributions towards the etiology of homosexuality has been collected from studies of the general population. These studies establish a strong connection between biological, uncontrollable and stable (essentialist) attributions of the causes of homosexuality and positive attitudes towards LGB individuals. No study to date has explored the types of attributions held by non-fully accepting parents and whether these attributions are significantly different than those held by fully accepting parents. In addition there has been no study exploring change in attributions of homosexuality in the population of non-fully accepting parents. The purpose of this study was to: (a) examine whether non-fully accepting parents hold more constructivist attributions of homosexuality than do fully accepting parents; and (b) explore whether an intervention emphasizing essentialist attributions of homosexuality would help shift non-fully accepting parents' constructivist attributions toward more essentialist attributions.

Fifty-seven participants engaged in this internet study. Of the 57 participants, 24 completed the entire study, 15 fully-accepting parents and 9 non-fully accepting parents. The study and related questionnaires and IAT were constructed in order to gain insight into the attributions held by fully-accepting parents and non-fully accepting parents of gay children towards the etiology of homosexuality explicitly as well as implicitly. The manipulation was composed of three filmed interventions (each

participant viewed one intervention by randomized assignment) in which an actor was playing: (a) a parent of a gay child; (b) a friend of the parent; or (c) an expert communicating a message of essentialist attributions of homosexuality. Post manipulation questionnaires and the IAT were used to explore whether interventions helped shift constructivist attributions towards more essentialist ones.

Results indicate that non-fully accepting parents held more constructivist attributions of homosexuality than did fully-accepting parents. In addition, filmed interventions proved helpful in changing non-fully accepting parents' constructivist attributions to more essentialist attributions, more so than in the fully-accepting group.

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CHAPTER I

LITERATURE REVIEW

Hello mum,

This is your damaged son. Remember the demonstration broadcasted on the television?...You sat down and just said: "It is better for a parent to die before finding out their son is gay". You hurt me so much mum, without knowing, and you went on, "I wouldn't have accepted my son if he told me that [he was gay]. Those poor parents of these children" you added. In that moment you broke me. In one sentence you brought to my attention that I'd be better off dead than alive... I didn't choose to be like this and I don't see any flaw in it. I had to choose between my happiness and yours, and I chose. You will not have to endure any more sorrow.

("The letter that was never written", La'Isha magazine, June 2009).

The latter half of the twentieth century has seen an overall positive change of attitudes toward homosexuals (Innala & Landen, 2002; Weishut, 2000). It seems that today, more than ever, a majority of lesbian, gay and bisexual (LGB) individuals are able to lead healthy, happy lives. Despite these positive changes, however, homosexuality is still regarded by many as "outside the boundaries of acceptability" (Weishut, 2000). Gay men and lesbians continue to be stigmatized socially in Israel (Ben-Ari, 1998). Such stigma, prejudice and discrimination have been shown to have negative effects upon sexual minorities. Indeed, findings from studies on U.S. samples have found that a disproportionate minority suffer from mental disorders such as substance abuse, affective disorders and suicide (Meyer,2003). The link between

unique LGB social stressors, such as discrimination, and psychological distress has been termed by Meyer (2003) "minority stress"

Unfortunately, for some LGB individuals, stress due to their sexual orientation comes from within their family. In a sample of lesbian and gay youth conducted in the United States, D'Augelli & Hershberger (1993) found that a significant percentage of mothers were intolerant (8%) or rejecting (12%) of their child's sexual orientation at time of disclosure. Among fathers, 10% were intolerant and 18% were rejecting. A later study by D'Augelli, Hershberger & Pilkington (1998) showed similar data concerning the reaction of mothers to their child's disclosure, but found that twice as many fathers were found to be intolerant (16%) or rejecting (26%) compared to findings from the 1993 study. Moreover, LGB adolescents reported alarmingly high rates of family victimization: 24% of mothers and 19% of fathers were verbally abusive towards their gay child; 3% of mothers and 2% of fathers threatened to harm them physically, and percentages were similar for actual physical attacks. A recent study conducted on 150 Israeli LGB adolescents found that 15% of parents were fully or almost fully rejecting at time of disclosure (Samarova, Shilo & Diamond, in press).

Family Responses to Minority Sexual Orientation and LGB's Well-Being

Not surprisingly, the effects of parental rejection are particularly pernicious. Ryan and colleagues (Ryan, Heubner, Diaz & Sanchez, 2009) found that young LGB adults who reported high levels of family rejection during adolescence were 8.4 times more likely to report having attempted suicide, 5.9 times more likely to report higher levels of depression, 3.4 times more likely to report illegal drug use, and 3.4 times more likely to report having engaged in unprotected sexual intercourse, compared to

peers from families with no or low levels of family rejection. Additionally, D'Augelli and colleagues (D'Augelli, Grossman, Salter, Vasey, Starks & Sinclair, 2005) found that parental rejection and efforts to change gender atypical behavior among LGB youth during childhood were strong predictors of suicide attempts. A recent study on Israeli LGB adolescents found a significant negative correlation between adolescents' report of parental acceptance and psychological symptoms (Samarova, Shilo & Diamond, in press).

In contrast to adolescents and young adults who experience parental rejection, those reporting high levels of parental acceptance were half as likely to suffer from depression, report substance abuse, have suicidal thoughts or attempt to commit suicide (Ryan, Russell, Huebner, Diaz & Sanchez, 2010). Similarly, Tharinger & Wells (2000) acknowledged positive and secure family relationships as a central protective factor in the adjustment of LGB youth. A number of studies on LGB individuals have found that parental acceptance is related both directly and indirectly to self-esteem (Savin-Williams, 1989) and psychological well being (Heatherington & Lavner, 2008). Adolescents themselves report that family support is a critical buffer against negative forces outside the family and within it (Diamond, et al., 2011). Parental acceptance has been shown to protect against extra-familial gay-related stressors, such as victimization (Hershberger & D'Augelli, 1995).

Causes of Negative Parental Reactions

Multiple factors can contribute to parental non-acceptance. For example, parents may feel guilty about their child's minority sexual orientation. Frequently, parents initially respond to their child's disclosure by asking "What did I do wrong?",

believing they weren't good enough parents, did not give their child sufficient attention or gave them too much attention, didn't provide a sufficiently strong male role model or were too involved as mothers (Savin-Williams, 1998; Bernstein, 1990). Such thoughts can lead to frustration and anger which, in some instances, are then directed at their adolescent or adult child. Parents may also experience deep sadness and disappointment that their son or daughter will not live out the life that they (parents) had imagined for their son or daughter and for themselves (Saltzburg, 2004; Bernstein, 1990). In this state of emotional turmoil, parents try to assimilate their negative images of homosexuality with positive thoughts of their own child. The anguish produced by this emotionally disorganizing process sometimes leads parents to deny their child's minority sexual orientation or to abdicate parenting functions. This disconnection can lead to dysphoria, guilt, shame, and a sense of failure as a parent, and to frustration and anger directed toward the young adult.

Attributions regarding the Etiology of Homosexuality

The attributions that parents hold regarding the etiology of homosexuality are perhaps the strongest determinants of their reactions to their child's sexual orientation (Haider-Merkel & Joslyn, 2008). Bernstein (1990) mentions that causality is a reoccurring theme in discussions with parents of LGB children and reports that most parents, at least initially, believe that psychological factors are responsible for sexual orientation. This belief is associated with judgment and blame of parent and child. Parents who perceive their child's sexual orientation as a choice often become angry at them, interpreting their choice as selfish or even as a personal affront. The extent to which parents believe that sexual orientation is an essential, unchangeable part of

their child (essentialist model) or that it is a choice (constructivist model) is assumed to be strongly correlated with the parents' attitudes and feelings toward their child. In line with Harold Kelly's (1973) attribution theory, research has shown that when people consider that a person's perceived flaws are beyond their control or that the person is not responsible for them, they respond more positively, like and feel sympathy for the individual, and express less anger. On the other hand, when people believe that the individual is responsible for her/his stigmatized behavior or distress, and that their behaviors are under their control or are reversible, they are more likely to respond with less sympathy and evaluate the individual's personality traits more negatively (DeJong, 1980; Weiner, Perry & Magnusson, 1988). These findings have been found in relation to individuals suffering from AIDS, child abuse, drug addiction and obesity. Moreover, in studies in which people's perceptions of the controllability of the individual's behavior or state were experimentally manipulated, attitudes shifted accordingly (DeJong, 1980; Weiner, Perry & Magnusson, 1988).

Several studies have specifically established a relationship between attributions regarding the causes of homosexual orientation and attitudes toward homosexuals (Ben-Ari, 1998; Ernulf, Inalla & Whitman, 1989; Inalla & Landen, 2002; Oldham & Kasser, 1999; Piskur & Degelamn, 1992; Aramesto & Weisman, 2001, Lewis, 2009; Wood & Bartkowski, 2004; Haslam & Levy, 2006; Haider, Merkel & Joslyn, 2008). Such studies have compared two contradicting attributional models. The first is a psychological model, which proposes that homosexuals choose or learn to engage in homosexual behavior and implies that homosexuality is changeable (i.e., "constructivist model"). The second is the biological model (i.e., "essentialist model"), which proposes that homosexuality has a biological basis and suggests that

homosexuals have little to no control over their sexual orientation and that it is likely to be unchangeable. Correlation studies on the general population point to an association between holding a biological or essentialist attribution of homosexuality and positive attitudes toward the subject. Experimental studies and analogue studies asking individual to imagine that they were the parents of an LGB individual (Piskur & Degelamn, 1992; Aramesto & Weisman, 2001), have shown that exposure to biological explanations of homosexuality induced positive attitudes towards homosexuals including tolerance, a liberal view, and more favorable emotional reactions. No studies to date, however, have examined the link between causal attributions and attitudes among actual parents of LGB individuals.

Proposed Strategies for Shifting Attributions Regarding the Cause of Homosexuality

In light of the frequency of negative parental responses to children's self-disclosure, and the link between constructivist attributions and negative attitudes toward homosexuality, identifying strategies for shifting parents' attributions regarding the cause of homosexuality from psychological (constructivist) to biological (essentialist) are in order. Changing non-accepting parents' attributions, however, is no simple matter. Firstly, maintaining the belief that their child can (and will eventually) change allows parents to avoid the inevitable sense of loss, shame, sadness and helplessness that comes with the recognition that their child is and will remain homosexual (Bernstein, 1990). In that sense, one could make the case that constructivist attributions are a defense mechanism and, thus, grudgingly relinquished. Such defenses are likely to be particularly entrenched among parents whose core values or beliefs are in conflict with homosexuality (e.g., religious parents or parents

from certain cultural/ethnic backgrounds in which homosexuality is defined as aberrant, pathological and unacceptable). These parents may be unwilling to engage in or process any information or messages that suggest that homosexuality may be biological/genetic (Dole & Sinatra, 1998), and may be inclined to interpret new information in a manner that allows them to maintain their initial beliefs (i.e., by critically scrutinizing and counter arguing information that does not mesh with their prior knowledge and examining relevant empirical evidence in a biased manner)(Lord, Ross & Lepper, 1979; Munrow & Ditto, 1997).

One factor determining the likelihood that new information will impact upon attitudes is the degree to which the individual is engaged in the message. Dole & Sinatra (1998) defined high engagement as deep processing using elaborative strategies and metacognitive reflection. Individuals in high engagement compare existing conceptions with new information whilst thinking deeply about arguments and counterarguments related to the message. Low engagement, on the other hand, involves low amounts of processing and the use of fairly simple strategies, such as maintenance rehearsal. This may lead to the assimilation of new information into preexisting conceptions without significantly changing them.

Degree of engagement is influenced by the degree that one is motivated to engage in the message (Albarracin, 2002; Dole & Sinatra, 1998). When information is presented in a manner that is personally relevant to the individual, motivation and therefore engagement are increased. Another factor influencing depth of engagement may be peripheral cues deriving from aspects of the message that are not content related, such as the likability of, or ability to identify with, the message communicator (Albarracin, 2002; Chaiken & Eagly, 1976; Chaiken & Eagly, 1983; Dole & Sinatra, 1998;

Petty & Cacioppo, 1986). For example, in one study on the influence of testimonials, Silvia (2005) found that feeling similar to the message communicator increased compliance by increasing liking for the communicator. Other studies have also found that identification with the message communicator is a relevant parameter of message effectiveness, so that greater identification ensures a greater likelihood of achieving lasting attitude or behavioral change (Basil, 1996; Herget, Agthe & Sporrle, 2009). Identifying with and liking the messenger may increase engagement and openness to change by fostering positive interpretations of the communicator's actions, thus reducing the degree of threat of the message. Moreover, seeing a messenger with whom one identifies deliver a threatening/difficult message regarding a topic that the messenger her/himself has dealt with personally, particularly when the deliverer of the message appears to have coped with the situation successfully, may prompt a positive affective reaction on the part of the listener (i.e., "if she survived or even thrived, perhaps I can too") which also serves to lessen the perceived threat of the message (Munrow & Ditto, 1997; Schwarz & Clore, 1983). Therefore, a threatening message, such as "your son was probably born gay", may be most deeply processed by non-accepting parents when the message is delivered by somebody that they like and identify with, when the message is one that is personally relevant (i.e., is similar to what the individual is experiencing, including all of the complexities, challenges and ambivalences) and the messenger is somebody that has personally undergone a similar experience and has survived or thrived.

CHAPTER II

AIM OF STUDY

This study had two aims. The first was to examine whether there was a correlation between parental non-acceptance and attitudes/attribution regarding causality. We examined this correlation by examining parents' explicit and implicit responses regarding causality. The second, and main aim of the study, was to examine the relative effectiveness of three interventions designed to shift non-fully accepting parents' attributions regarding their children's homosexuality from constructivist to essentialist.

The first intervention was a videotaped testimonial of a father describing the process he went through in realizing that his son was essentially gay, including the pain, confusion, denial, shame and doubts he overcame. This intervention was meant to engender the highest level of identification, liking, personal relevance, and included peripheral cues signaling hope and the capacity to survive and thrive. Consequently, this intervention was hypothesized to lead to the highest level of engagement and thus produce the greatest change from constructivist to essentialist attributions. The second intervention was a videotape of an individual describing the experience of a father and the process he went through in acknowledging his son was gay. The text of this intervention was identical to the text of the first intervention, but was delivered by a narrator who was not the father himself (i.e., delivered in the third person rather than in the first person narrative). While the personal relevance of the message for the listener was equally high in this intervention (same text, same story), the level of identification with the messenger was less, and the peripheral cues implicitly communicating hope and resilience were not present. Consequently, this intervention

was expected to have less of the intended impact than the first intervention. In the third intervention, an individual presented scientific data supporting the thesis that male sexual orientation is innate and stable (essential). This intervention was expected not only to have less of a positive impact, but to perhaps have a paradoxically negative impact (i.e., increase parents' confidence in their constructivist attributions) since engagement was expected to be low, due to low identification with the messenger, and emotional arousal (sense of threat) was expected to be high due to the nature of the topic. All three interventions were delivered via 4 minute videotapes and the messenger in all three videos was the same actor. Causal attributions regarding homosexuality were assessed using both explicit and implicit measures.

CHAPTER III

METHODOLOGY

Participants

Participants included 65 parents of gay males. Only parents of gay children who knew or suspected that their child was gay, and who were willing to report their level of acceptance of their child's sexual orientation, were recruited for the study. Parents were asked to indicate their level of acceptance by choosing their percentage of acceptance from zero to one-hundred percent, with intervals of ten percent between choices. No further explanation was given. Of the 65 participants who entered the study, 8 did not report their level of acceptance and were therefor excluded from the study. All 57 remaining participants completed the first questionnaire (*attribution*

questionnaire). Of the 57 participants who completed the first questionnaire, 40 completed the first IAT as well as the first questionnaire but did not view the movies or complete the second IAT. Twenty-four of the 40 completed the entire study (19 females, 5 males). Levels of acceptance reported by participants are shown in table 1.

The participants who completed the entire study ranged in age from 44 to 67 years (Md=55.5 years). Eighty percent reported that over a year had passed since realizing that their son was gay. The remaining 20% reported that less than a year had passed. Sons' ages ranged from 17 to 34 years (Md=25 years). Forty-eight percent reported that their ethnic origin was Western European. Twenty-two percent were from Eastern Europe, 8.5% from Africa, 8.5% part European and part African and 13% from America. Thirty percent reported no religious affiliation, 48% reported little religious affiliation, 17% reported moderate religious affiliation and 5% reported a great deal of religious affiliation. Participants also varied in their level of education. Seventeen percent were high school graduates, 17% attended higher education but didn't acquire a degree, 39% had obtained a B.A. degree, 22% had acquired an M.A. degree and 5% had a doctorate. All participants reported being Jewish.

Table 1. Levels of parental acceptance

Levels of acceptance	N=57	N=40	N=24
100%	28	22	15
90%	6	5	4
80%	3	2	1
70%	2	1	0
60%	2	2	1

50%	2	2	3
40%	6	3	0
30%	2	1	0
20%	3	1	0
10%	0	0	0
0%	3	1	0

NOTE: For the purpose of our study we regarded parents who reported 100% acceptance of their gay child as "fully accepting" (N=28 in the sample of 57, N=22 in the sample of 40 and N=15 in the sample of 24) and parent's who reported less than 100% acceptance as "non-fully accepting" (N=29 in the sample of 57, N=18 in the sample of 40 and N=9 in the sample of 24). The sample of 57 subjects was used when analyzing data of attribution questionnaire only at time 1 (see *primary analysis, goal 1*). The sample of 40 subjects was used when analyzing data from IAT on time 1 (see *primary analysis, goal 1*) or when analyzing the correlation between explicit and implicit measures of attributions (see *preliminary results*). Finally, we used the sample of 24 subjects when conducting Mann-Whitney and independent samples T-test to establish whether parents had a change in attributions post manipulation (see *primary results goal 2*).

Measures

Manipulation check. In order to insure that parents actually watched the movie, they were asked to answer two open-ended questions regarding the identity of the speaker in the movie and the general message presented in the movie.

1. *What was the identity of the speaker in the movie?*
2. *What was the main theme of the movie?*

In addition, in order to insure that the three interventions indeed differed on degree of identification with the speaker and engagement in the message, we asked two further

questions exploring the degree to which the participant identified with the speaker and found the information presented innovative:

1. *How much did you identify/relate with the speaker in the movie? (1-not at all, 5- complete identification).*
2. *How much was the information in the movie innovative to you ? (1-not at all, 5-a lot)*

Attributions regarding cause of homosexuality. In order to assess parents' explicit attributions regarding the cause of homosexuality, we asked them to respond to a number of questions extracted from the mutability dimension of the *Essentialist Belief Scale* (Haslam, Rothschild & Ernst, 2000). We asked participants to indicate the degree to which they agreed with/endorsed each statement on a scale from 1 (not at all) to 7 (absolutely). Statements were:

1. *A homosexual is a person who chose this sexual orientation for different reasons.*
2. *A homosexual is a person who was born with this sexual orientation (reversed claim).*
3. *A homosexual person can turn into a heterosexual person.*
4. *A heterosexual person can turn into a homosexual person.*

NOTE: *Higher scores indicate a constructivist attribution whereas lower scores indicate an essentialist attribution.*

Attribution questionnaire scores were calculated as the mean score of all four statements, after reverse scoring statement two ("*A homosexual is a person who was born with this sexual orientation*"). Lower scores are associated with essentialist attributions of homosexuality, whereas higher scores are associated with constructivist attributions of homosexuality.

In addition, participants completed a *visual assessment scale* (VAS) representing a continuum from "essentialist" beliefs about homosexuality at one end to "constructivist" beliefs about homosexuality at the other end. The VAS scale was comprised of 10 empty boxes (i.e., no anchors) aligned in a row and participants were asked to mark the box best representing their stance on this continuum.

Implicit Association Test (IAT). We used an implicit measure of attitudes toward homosexuality (Implicit Association Test; Greenwald, MacGhee & Schwartz, 1998) in order to validate the results of the explicit measure. The single-target IAT was composed of a categorization task. Participants were asked to respond as quickly as possible to stimuli (words or images) which appeared in the center of a computer screen, ascribing them to categories appearing in the left and right upper corners of the computer screen (using the "e" and "l" keys respectively). The categories were "*changeable*" (appearing in one corner of the screen), "*unchangeable*" (appearing in the opposite corner of the screen) and "*homosexuality*" which on each task block appeared either next to the "*changeable*" category or next to the "*unchangeable*" category. The stimuli were either synonyms or images relating to one of the three categories. The IAT contained two training blocks consisting of 11 stimuli (5 corresponded with the *homosexuality* category, 3 with the *changeable* category and 3 with the *unchangeable* category) and four task blocks consisting of 36 stimuli each (16 corresponded with the *homosexuality* category, 10 with the *changeable* category and 10 with the *unchangeable* category). In the first task block, the categories "*changeable*" and "*homosexuality*" appeared together on the right upper corner of the computer screen and items corresponding with one of the categories required a

response with the right answer key. The category "*unchangeable*" appeared on the left upper corner of the screen and items corresponding with this category required a response with the left answer key. All stimuli items (corresponding to one of the three categories) appeared on the middle of the screen intermixed. In the second task block, the same stimuli appeared, however classification changed; the "*homosexuality*" category now appeared next to the category "*unchangeable*" on the left upper corner of the screen. "*Unchangeable*" or "*homosexual*" items now required the left answer key. Items corresponding with the "*Changeable*" category still required the right answer key. The remaining two phases were a repetition of the former blocks. Half of the subject began the IAT test with the classification of "*changeable*" + "*homosexuality*" while the other half began the test with the classification of "*unchangeable*" + "*homosexuality*" in order to control for the effect of the first pairing.

IAT scores were generated by calculating the standardized difference between mean reaction times for block 1 and 2 and by calculating the standardized difference between mean reaction time for block 3 and 4, then by calculating the mean difference for the entire test. Positive scores indicate an association between *homosexuality* and *unchangeable* while negative scores indicate an association between *homosexuality* and *changeable*. The higher the value, the stronger the association.

Attitudes toward gay son (ATGS). In order to assess parents' explicit attitudes toward their gay child, we asked parents a series of questions and had them indicate the degree to which they agreed with/endorsed them on a scale from 1 (not at all) to 7 (absolutely):

1. *I want to feel close to my child.*
2. *I want to spend more time with my child.*
3. *I want to be exposed to my child's world.*
4. *I want to understand my child.*
5. *I respect my child's decisions in life.*

Procedure

The study was conducted through the internet in order to maintain the anonymity of the participants. The study was advertised in national gay related internet sites and forums. The advertisement targeted both parents who felt apprehensive about their child's gay sexual orientation and gay youth themselves who felt that their parents were non-accepting. Since recruitment was challenging, we also sent out personal e-mails to parents participating in support groups and to gay youth whom we thought could reach out to their parents and invite them to participate in the study. In addition, we offered a prize of 800 shekels to be raffled between participants who completed the study. The exact wording of the advertisement appears in Appendix A.

Upon entering the study, participants were asked to read and sign a consent form, indicate how accepting they are of their child's sexual orientation in percentiles ranging from 0% (not at all) to 100% (full acceptance) and complete a demographic questionnaire. Participants were then asked to complete a series of questions regarding their attributions concerning the cause of their child's homosexuality, complete a one-sided implicit association test (IAT) (Greenwald, MacGhee & Schwartz,

1998) designed to implicitly measure the strength of their associations between homosexuality and essentialist versus constructivist attributions and answer a set of questions regarding their attitudes toward their son's sexual orientation (TIME 1). A link to the consent form and measures used in this study is available in Appendix A.

Participants were then randomized to one of three intervention conditions described above (parent, third person or scientific expert). All three films were of the same actor who portrayed the three different persons. The interventions were filmed using the same actor in order to eliminate individual differences in presentations. In the personal story, the actor described the process he went through as a parent, in the first person. In the acquaintance condition, the actor told the same exact story in the third person. The verbatim transcript described the process a father we interviewed went through, including his shift from anger and feelings of self-blame, his belief that his son's homosexual orientation was changeable shifting to a more accepting stance of acknowledging his son's sexual orientation as a part of his identity and understanding that rejecting his son's homosexual identity was equivalent to rejecting, and perhaps, losing his son (appendix B & C). In the scientific information condition, we used a short summary of some representative studies in the area of biology, genetics and conversion therapy (appendix D). Participants were randomly assigned one of the videos to watch. They were instructed to watch and listen carefully to the video and were told that they would be asked questions about the material after viewing the video.

After viewing one of the videos, participants were asked some questions about the material shown in their given condition (see *manipulation check*). They were again

asked to complete the attribution questionnaire, the VAS scale, the IAT and the ATGS questionnaire (TIME 2).

CHAPTER IV

RESULTS

Preliminary results

Range and standard deviation for each of the measures is shown in table 2.

While the distribution of data for the attribution questionnaire and IAT measures were reasonable, those for the VAS and ATG were not. Therefore, these last two measures were not included in subsequent analyses.

Table 2: Descriptive statistics of dependent variables (N=24).

	Average (Range)	Standard deviation
TIME 1		
<i>Attribution questionnaire</i>	2.21 (3)	1.01
<i>VAS scale</i>	8.95 (8)	2.19
IAT	0.17 (1.03)	0.26
<i>ATGS questionnaire</i>	6.63 (3.20)	0.76
TIME 2		
<i>Attribution questionnaire</i>	2.07 (3)	1.01
<i>VAS scale</i>	9.25 (8)	1.89
IAT	-0.18 (1.49)	0.32
<i>ATGS questionnaire</i>	6.78 (2.40)	0.55

Reliability of measures. In order to establish the reliability of the attribution questionnaire, we calculated the Cronbach's alpha for internal consistency and found it to be 0.76 (N=57). In order to establish the reliability of the IAT, we calculated a test-retest correlation between IAT scores at time 1 and the IAT scores at time 2 and found a significant positive correlation (N=26, $r = 0.38$, $p = 0.02$, one-tailed), indicating a satisfying test-retest reliability of this measure. However, no significant internal consistency was found (N=36, $r = 0.19$, ns) (Internal consistency of the IAT was calculated by correlating the first and second half of the first IAT [iata1 & iata2]).

Correlation between attribution questionnaire and IAT. In order to establish construct validity for the attribution questionnaire, we calculated a correlation between this questionnaire and the IAT results at time 1 as they both purportedly relate to the same theoretical construct. We expected the correlation to be negative since positive scores in the IAT indicate an association between "homosexuality" and "unchangeable" categories whereas a lower score in the attribution questionnaire indicates the same. Indeed, we found a significant negative correlation between the two measures (N=40, $r = -0.378$, $p < 0.009$, one-tailed). When looking at each sub-group separately, we found that the correlation between the two measures was particularly strong in the non-fully accepting group (N=18, $r = -0.48$, $p < 0.02$, one-tailed) and did not reach significance in the fully accepting group (N=22, $r = -0.26$, ns). When examining the association between attribution scores and IAT scores at time 2, no significant correlations were found for either the non-fully accepting parents (N=9, $r = -0.378$, ns) nor for the accepting parents (N=15, $r = 0.079$, ns).

Manipulation check. A trail run done on a sample of M.A. and B.A. psychology students established the credibility of the message communicator in all three movies. In the test run, in order to insure that participants paid attention to the movie they were supposed to view, they were asked to answer two informational open-ended questions about the movie when it was over. All participants answered these questions correctly. Twenty percent of all participants reported that the information given by the communicator was slightly innovative (57% in the expert's condition, 0% in the third person story condition and 11% in personal story condition). In contrast, 80% reported that the information was not innovative. In addition, participants were asked to rate the amount of identification they felt towards the message communicator on a scale of 1 (not at all) to 5 (absolutely). There were no significant differences in identification between the three movies ($F(2,21)= 3.00, P>0.05$). (expert: Mean=4.14, N=7; friend of father: Mean=3.37, N=8; father: Mean= 2.55, N=9).

Primary analysis

In order to examine whether "non-fully accepting" parents held a more constructivist attribution of homosexuality than did fully accepting parents, we conducted two different analyses: one on the attribution questionnaire (N=57) and the other on the IAT responses (N=40). In order to analyze the results of the attribution questionnaire, we conducted a Mann-Whitney test comparing the median attribution scores at Time 1 for each of the two groups. We elected to use the Mann-Whitney test since the assumption of normally distributed scores was not met. Results indicated that fully accepting parents scored lower (median = 1.37) on the attribution questionnaire than did non-fully accepting parents (median = 2.25). The Mann-

Whitney U was found to be 90.5 ($Z = -2.93$), $p = 0.000$ (one-tailed). This finding shows that non-fully accepting parents evidenced more constructivist attributions than fully accepting parents.

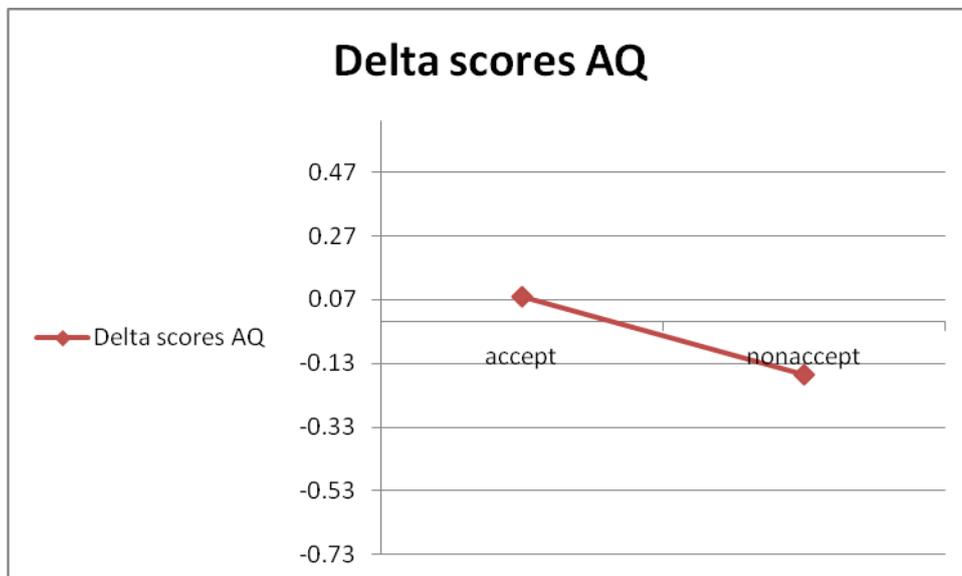
In order to examine IAT responses, We conducted an independent sample T-test using IAT scores at Time 1 as the dependent variable and group (non-fully accepting parents versus fully accepting parents) as the independent variable. There was no significant difference between the IAT scores for fully accepting ($M=0.19$, $SD=0.28$) versus non-fully accepting parents ($M=-0.15$, $SD=0.24$), $t(22)=0.35$, ns.

Goal 2. Our initial hypothesis was that non-fully accepting parents would evidence a shift in attitudes towards a more essentialist attribution of homosexuality post-manipulation, and that this change in attitude would differ in magnitude according to the type of movie the participants viewed. However, our small sample size ($N=24$) led to an insufficient amount of subjects in each cell (intervention condition), precluding such analysis. Thus, we instead focused on whether watching any of the three movies was associated with increased essentialist attributions among non-fully accepting versus fully accepting parents. Because the data for both the attribution and IAT measures were not normally distributed, we computed a new variable: the delta score (i.e., change score) for each dependent variable from time 1 and time 2 $[(\text{time 2}-\text{time1})/\text{time 1}]$. These change scores were normally distributed for the attribution questionnaire but not for the IAT.

Attribution questionnaire. In order to examine whether parents' attributions changed as the result of the intervention, we conducted an independent-samples t-test comparing fully accepting versus non-fully accepting parents. There was a

significant difference in the change scores, with fully accepting parents ($M=0.08$, $SD=0.3$) showing less change than non-fully accepting parents ($M=-0.16$, $SD=0.3$), $t(22)=1.78$, $p = 0.04$ (one-tailed). These results (shown in graph a) suggest that exposure to the movies led to greater positive change in the non-fully accepting group. Closer inspection of the data showed that the non-fully accepting parents had a negative delta score indicating a nominal decline in attribution questionnaire scores, whereas fully accepting parents evidenced nominally positive deltas, on average. Our results suggest that when non-fully accepting parents were exposed to information suggesting that homosexuality was a biologically-based trait that was stable over time, their own explicit attributions toward homosexuality shifted from a constructivist to a more essentialist stance. Fully accepting parents, on the other hand, exhibited little to no change.

Graph a. Independent samples T-test for delta scored of the attribution questionnaire (AQ)



IAT. Since the change scores for the IAT were still skewed, we conducted a Mann-Whitney test. While descriptive statistics suggested that fully accepting parents evidenced greater nominal change (median = -0.54) on the IAT than did non-fully accepting parents (median = -0.30), results of the Mann-Whitney U 61 ($Z = -0.38$), were not significant. In other words, there were no differences found in change in scores on the IAT (change from time 1 to time 2) between the accepting and non-fully accepting groups.

CHAPTER V

DISCUSSION

This study examined whether non-fully accepting parents of LGB offspring held more constructivist attributions regarding the cause of their child's sexual orientation than did fully accepting parents. In addition, we examined whether viewing a father (first person), a friend of the father (third person) or an expert discussing the biological basis of sexual orientation helped to shift attributions in the direction of biological causal theories. Our findings suggest that, indeed, non-fully accepting parents held more constructivist attributions than did fully accepting parents, based on an explicit measure of attributions. More specifically, non-fully accepting parents, to a greater degree, believed that homosexuality is mutable and a result of environmental causes. This finding is in line with findings from previous research on the general public showing that attitudes toward homosexuals are related to causal theories (Ben-Ari, 1998; Ernulf, Inalla & Whitman, 1989; Inalla & Landen, 2002; Oldham & Kasser, 1999; Piskur & Degelamn, 1992; Lewis, 2009; Wood & Bartkowski, 2004; Haslam & Levy, 2006; Haider, Merkel & Joslyn, 2008). It is also in line with findings from a previous

analogue study examining causal attributions and responses among individuals asked to imagine that they had a homosexual child (Aramesto & Weisman, 2001). It is also consistent with reports from parents who participated in support groups who described how their own acceptance process was intimately linked to changes in how they understood the causes and controllability of their child's sexual orientation (Fields, 2001). This is the first study, to the best of our knowledge, to examine the link between causal attributions and acceptance in this particular population – actual non-fully accepting parents. These findings also have applied implication because they suggest that causal attributions may be an important target of intervention among non-fully accepting parents.

While we were not able, for statistical reasons, to examine the differential effects of having another parent, a third person describing the experience of a parent or an expert present data suggesting that biology influences sexual orientation, we were able to examine whether the presentation of information suggesting the biological nature of homosexuality (across presenters) impacted upon attribution. We found a significant effect in the expected direction on explicit attitudes. More specifically, non-fully accepting moved toward more essentialist attributions, whereas fully accepting parents evidenced little to no change of attributions. Our results suggest that when non-fully accepting parents are exposed to information suggesting that homosexuality is biologically determined and stable, their own explicit attributions toward homosexuality shift from a constructivist to a more essentialist stance. We did not expect a significant change in fully accepting parents' attributions, since they already held such attributions for the most part and, thus, there was a

statistical "floor effect". Our finding that non-fully accepting parents' attributions shifted as the result of being presented with data indicating the essentialist nature of homosexuality is the first finding, to the best of our knowledge, showing that an intervention may be able to lead to shifts in causal attributions among non-fully accepting parents of LGB individuals. These findings are interesting in light of studies on the general population showing that when people's perceptions of the controllability of the individual's behavior or state are experimentally manipulated, their attitudes towards homosexuals become more positive, they show greater willingness to help, and are more likely to experience affection and less likely to experience unfavorable emotional reactions (Piskur & Degelman, 1992; Aramesto & Weisman, 2001). This finding is encouraging, particularly considering the fact that parents of gay children are typically more emotionally activated by the topic of homosexuality than the general population and therefore hold stronger opinions on the subject – opinions that are hypothetically more resistant to change (Lord, Ross & Lepper, 1979; Munrow & Ditto, 1997).

We also found that there was a correlation between explicit causal attributions and the IAT. This finding is important because it suggests that the IAT we developed is a valid measure of parents' implicit attitudes and causal attributions regarding their child's same-sex orientation. Interestingly, in nominal terms, the correlation between measures was stronger in the non-fully accepting group than among the fully accepting parents. In other words, non-fully accepting parents' explicit reports of their attributions were more closely in line with their implicit responses reflecting attributions. For a number of reasons, such a finding should not be surprising.

Research on attitudes has found that people do not always say what they really think and that this is particularly true when dealing with socially sensitive issues, such as prejudice and stereotypes (see Fazio & Olson, 2003 for further references). Indeed, Fazio & Olson (2003) established that the more sensitive the domain, the greater the likelihood that motivational factors (such as social desirability bias) will be evoked and exert some influence on explicit responses, leading to a low explicit-implicit correlation. Nosek (2007) refers to self-presentation, the alteration of a response for personal or social purposes, as one of the moderators accounting for low correlations between explicit and implicit measures. Perhaps those parents who were willing to disclose that they were less than 100% accepting of their gay child and that they had doubts about whether their child's homosexuality was biologically driven, were less susceptible to demand characteristics and were simply being more honest. Along the same lines, some of the parents reporting 100% acceptance may have actually been struggling with their child's sexuality yet were unwilling to admit it to others (or even themselves).

Another interesting finding was that there was no correlation between the measures at time 2, after the intervention. This may reflect the fact that explicit attitudes tend to change more quickly than implicit attitudes. Weishut's (2000) overview of attitudes towards homosexuality in the past decade (with special attention given to Israel) concludes that there has been significant change in the judicial system and in the medical system and yet prejudice is still commonplace. It may be that, in our study, the explicit attitudes of non-fully accepting parents changed by time 2, but the implicit attitudes did not yet change. With that said, great caution should be made when interpreting these particular findings. Nosek (2007) reminds us that instrument

reliability can moderate the correlation between explicit and implicit measures. In this context we should keep in mind that the square root of the internal consistency of the IAT serves as the maximum possible correlation between two measures.

Overall, our results show that non-fully accepting parents differ significantly from fully accepting parents in the attributions they hold regarding the etiology of homosexuality, and that non-fully accepting parents' attributions shifted to a more essentialist stance after exposure to information suggesting that biology influences sexual orientation; although this shift was evident only in relation to the explicit measure of attitudes and attributions. One may contend that our non-findings regarding the implicit measure of attitudes are difficult to interpret, since it may simply reflect the low reliability of the measure. Another possible explanation for the non-findings is that the IAT, as opposed to explicit measures, assesses constructs that are related but distinct from explicit attitudes (Nosek, 2007). Gawronski & Bodenhausen (2006) conceptualize implicit attitudes as associative evaluations: automatic affective reactions resulting from particular associations activated automatically when one encounters a relevant stimulus. Explicit attitudes are conceptualized as propositional processes: evaluations resulting from propositional processes derived from any kind of information that is considered relevant for a given judgment. In other words, explicit attitudes are a consequence of change in evaluation of an object through exposure to new information or familiar information subjected to additional consideration. On the other hand, implicit attitude change is considered slower than explicit attitude change and, in most cases, is a product of repeated pairing between an attitude object and related evaluations. Moreover, the dual-attitude model (Wilson, Samuel & Scholler, 2000) suggests that explicit attitudes change relatively easily, whereas implicit

attitudes, like old habits, change more slowly. Indeed, sometimes contradicting attitudes can coexist simultaneously in memory. When dual attitudes exist, the implicit attitude is activated automatically, whereas the explicit one requires more capacity and motivation to retrieve from memory. When people are able to retrieve explicit attitudes, they can override implicit attitudes. In this study we presented information in a manner that would more likely elicit an explicit attitude change. The change in explicit measures shows that when evaluation is involved, parents do consider biological explanation of homosexuality and respond in a positive way. Yet change in implicit measures requires sustained, repeated exposure to new information. Nevertheless, explicit attitude change may represent an important, initial step in the change process.

Our study had some notable strengths. First of all, we had a clearly defined population. Secondly we utilized a highly controlled experimental design, including controlling for potential differences in the presentation of information (e.g., same text, same presenter, etc.), a manipulation check, counterbalancing the IAT presentation and the use of both explicit and implicit measures of attitude. With that said, a number of methodological limitations temper our interpretation of our findings. First, the sample was small. The small sample size was the result of our attempt to attract that very population that is so hard to recruit because they avoid exposure, discussion and disclosure regarding their child's sexuality: non-fully accepting parents. There is good reason that this is, to the best of our knowledge, the first study of this kind on this population. It was extremely difficult for us to identify and recruit participants for this study. A second obstacle limiting the size of our sample was the demands of the IAT procedure. In fact, 30% of potential participants who entered the study website to

examine the study dropped out after completing the first IAT. Another methodological limitation is the unique version of the IAT (single-target) which was especially programmed for the study needs. This type of IAT differs from typical two-target versions and its validity and other psychometric properties require more scientific inquiry.

With that said, this study presents the first findings showing that parent's level of acceptance is related to their causal attributions regarding their child's same-sex orientation. Moreover, the findings suggest that presenting information about others' realization that their child's sexual orientation is likely to be biologically based and unchangeable, and/or scientific information suggesting that such is the case, seems to be effective in changing parents' explicit attributions. More research is needed in order to explore whether shifts in explicit attributions subsequently result in shifts in implicit attitudes, whether shifts in explicit attitudes results in shifts in behavior, and whether specific intervention are more effective at initiating shifts from constructivist to essentialist attributions among non-fully accepting parents.

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APPENDIX A

Recruitment advertisement

Parents:

Did your child tell you that he was gay?

Are you having a difficult time with this information? Has your relationship been damaged consequently?

We invite you to take part in a project sponsored by the department of psychology in Ben Gurion University. The project is confidential and anonymous. Whoever completes the study will take part in a raffle for the amount of 800 shekels.

In order to participate in the project press here: <http://hvr.d.me/AhBqbl>

Thank you for your contribution!

Children:

Did you come out of the closet yet feel that your parents are having a hard time knowing that you are gay?

Has your relationship been damaged by this?

We invite your parents to take part in a project sponsored by the department of psychology in Ben Gurion University. The goal of this project is to learn how to reach out to parents who are non accepting of their child's sexual orientation and to create a dialog with them on the subject.

The project is confidential and anonymous. Whoever completes the study will take part in a raffle for the amount of 800 shekels.

In order to participate in the project press here: <http://hvrđ.me/AhBqbl>

Thank you for your contribution!

APPENDIX B

Verbatim personal story (Father)

Hello, my name is Shmuel. I'm Adi's father, and... Adi finished high school and joined the army, and I think it was in the middle of his service, we heard, in the middle of a dark black night, we heard the phone ring, and Ora my wife and I answered and it was him on end of the line, and he was crying and we didn't know why and we tried to encourage him to talk and he said that he was afraid to tell us that... he's a homosexual, that he tried to commit suicide. That was a huge blow, shock. Afterwards we immediately told him that we accept him whatever he is, that he'll always be our son... but that's not really how we felt. It was like a bolt out of the blue.

It was a long night, we didn't sleep all night, there was great sadness. We started to digest what we had heard. It was really a time of darkness. People then didn't talk about these things at all. They didn't even utter the word, only in relation to negative talk like cursing and things like that, and there were a lot of questions really, and we were overcome by fear. I mean, my brothers, my parents were still around, my dad was the rabbi of the settlement!... "What will they say," was something that bothered me a lot.

Afterwards the truth was there was a long period of self-blame. That is, maybe it was because I wasn't at home enough and left all Adi's education to Ora, and I was almost never involved. I also thought about other circumstances that maybe caused him to be like that. Really there were a lot of questions and there were no answers to these questions and everything was left hanging. And really I entered the closet for I think a

period of 10 years. This stuff doesn't leave you. It follows you all the time. I stopped talking to people, to take part in conversations, I was afraid was afraid to disclose any hint about that matter.

Afterwards, I don't remember when it happened, but me and Ora started talking about the matter and... we tried to understand what are the circumstances here. What... we also started to receive all sorts of information about this phenomenon and the truth is that Ora shared with me some thoughts she had quite a while back, thoughts that she'd just pushed aside. She really noticed that Adi used to play with dolls also the time, although she brought him "boy" games, that she recognized in him some kind of tenderness. Then we began to grasp that there's no point in looking for blame, that children are born this way and that way.

And.. I think that about 7 or 8 years ago we joined a support group of parents from our area. It was there, I think, that for the first time me and Ora talked aloud about our experiences, and also we heard other parents talk about their feelings. Then we really started to understand how lucky we were to have reacted the way we did, saying that we loved him and we accepted him. It was really, it could have ended differently.

APPENDIX C

Verbatim third person story (Friend of father)

Hello, my name is Michael. I would like to tell the story of Shmuel, my friend, regarding his son Adi.

Adi finished high school and joined the army, and I think it was in the middle of his service, Shmuel heard, in the middle of a dark black night, he heard the phone ring, and him and his wife Ora answered and it was Adi on the end of the line, and he was crying and they didn't know why and they tried to encourage him to talk and he said that he was afraid to tell them that... he's a homosexual, that he tried to commit suicide. That was a huge blow, shock. Afterwards Shmuel and Ora immediately told Adi that they accept him whatever he is, that he'll always be their son. But that's not really how they felt. It was like a bolt out of the blue.

He told me later on that it was a long night, that he and Ora didn't sleep all night, that there was great sadness. They started to digest what they had heard. It was really a time of darkness. People then didn't talk about these things at all. They didn't even utter the word, only in relation to negative talk like cursing and things like that, and there were a lot of questions really, and Shmuel and Ora were overcome by fear. His brothers, his parents were still around, Shmuel's dad was the rabbi of the settlement!. "What will they say," was something that bothered Shmuel a lot.

Afterwards Shmuel was overcome by a long period of self-blame. That maybe it was because he wasn't at home enough and left all Adi's education to Ora, that he was almost never involved. He also thought about other circumstances that maybe caused

Adi to be like that. Really there were a lot of questions and there were no answers to these questions and everything was left hanging. And really Shmuel entered the closet for I think a period of 10 years. This stuff doesn't leave you. It follows you all the time. Shmuel stopped talking to people, to take part in conversations, he was afraid to disclose any hint about that matter.

Afterwards, I don't remember when it happened, but Shmuel told me that he and Ora started talking about the matter and they tried to understand what the circumstances here are. They also started to receive all sorts of information about this phenomenon and the truth is that Ora shared with him some thoughts she had quite a while back, thoughts that she'd just pushed aside. She really noticed that Adi used to play with dolls also the time, although she brought him "boy" games, that she recognized in him some kind of tenderness. They slowly started to realize that there's no point in looking for blame, that children are born this way and that way.

And.. I think that about 7 or 8 years ago Smuel and Ora joined a support group of parents from their area. It was there that for the first time he and Ora talked aloud about their experiences, and also heard other parents talk about their feelings. Then they really started to understand how lucky they were to have reacted the way they did, saying that they loved him and accepted him... because... it could have ended differently.

APPENDIX D

Verbatim scientific information (Expert intervention)

Based on Hill, Dawood & Puts (2012) and Morrow & Beckstead (2004).

Hello, my name is Dr. Shmueli, and I specialize in the field of research about sexual orientation. Among my interests I research the various factors that contribute to determining sexual orientation in human beings.

Over the years, people have asked themselves "what makes people homosexuals?" In the past, it was thought that the reasons for this were linked to the way children were raised, the absence of a father figure, negative environmental influences, etc.

However, today there is almost a consensus that homosexuality is mainly a consequence of biological factors. Though researchers in this field still haven't identified the specific biological factors that are responsible for a certain sexual orientation, and some even claim that there is a certain environmental influence, I would like in the current discussion to touch up a few aspects of research that support the position that homosexuality is innate.

In the next few minutes I will review some of the research sub-fields.

1 Frequency of homosexuality

Cross-cultural research presents a similar frequency of homosexuality across different populations, a frequency that is between 5 and 10%. This figure is evidence that this orientation is not only due to environmental influences but the result of factors related to the biology and genetics of humans.

2. Biological findings

The research literature in this field presents evidence supporting the notion that homosexuality has a genetic basis. For instance, twin and sibling studies show that the chance for a homosexual brother is greater when there is another brother who is homosexual. So it seems as though genes are involved in determining sexual orientation. Other studies point to differences between heterosexuals and homosexuals in the size and activity pattern of certain brain structures.

Stability of homosexual orientation over a period of time

A number of studies have followed children who displayed non-gender behaviors. These behaviors included preference for games or dress belonging to the female gender, feminine mannerisms and talk and avoiding masculine games. It seems as though that this sub-field research indicates that sexual orientation is stable and consistent over time, that it starts at a very young age and not a adolescent phenomenon.

4. Conversion therapy

Conversion therapy in the field of sexual orientation is therapy that tries to change the sexual orientation of the patient. There is no evident supporting the efficiency of this therapy as changing sexual orientation. Out of thousands who underwent therapy of this kind, the overwhelming majority report lack of success of therapy in changing sexual orientation while the few successes reported in literature are controversial. Moreover, it was found that some of the patients experience increased depression, suicidal tendencies, self-hatred, etc.

I tried to demonstrate a number of findings from different sub-fields that point to the possibility that sexual orientation in general and homosexuality in particular are related to biological and genetic factors and are stable and consistent over time. I would like to finish with a question from an alternative perspective: Has a heterosexual man in the course of his life ever made a conscious choice of his sexual orientation?

