Ex Gays? An Extended Longitudinal Study of Attempted Religiously Mediated Change in Sexual Orientation

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For many years the Public Affairs website of the American Psychological Association stated: "Can therapy change sexual orientation? No… [H]omosexuality is not an illness. It does not require treatment and is not changeable" (American Psychological Association, 2005). This absolute assertion that sexual orientation is immutable is notable in light of the dozens of older published studies suggesting significant change by some through psychotherapy or religiously-mediated methods (Jones & Yarhouse, 2007, p. 77ff). Claims like that of the American Psychiatric Association that "[T]here is no published scientific evidence supporting the efficacy of 'reparative therapy' as a treatment to change one's sexual orientation" (American Psychiatric Association, 2005) are questionable in light of such studies.

On what basis has immutability been asserted in light of prior published research claiming such change? Anecdotes of failed change (by "ex-ex-gays") have contributed to pessimism about the possibility of real change. The dismissal of past research as rooted in homophobic bias has served as an effective ad hominem argument that has undermined the credibility of this research. Further, there has been a steady decline of such published studies in the last several decades as the professional political climate has made such research professionally threatening, research funding and other support for such research has evaporated, and as the mental health professions have increasingly accepted various sexual orientations.

The methodological rigor of this older research also has been challenged. The public affairs website of the American Psychological Association (2005) long stated that "claims [of orientation change] are poorly documented. For example, treatment outcome is not followed and reported over time as would be the standard to test the validity of any mental health intervention." Beyond the lack of longitudinal follow up, prior studies have been criticized for utilizing obscure or idiosyncratic measures of sexual orientation change, for relying on therapist ratings rather than hearing directly and objectively from the subjects themselves, and for utilizing reports from memory of past feelings rather than sampling subjects prospectively. The present study was designed to address those weaknesses of previous studies by studying attempted change longitudinally and prospectively via standardized self-report measures . In some important ways, our study resembles the respected decade-long study by Lisa Diamond (2007; 2008) of a group of 89 non-heterosexual women. Where our study differs from hers most distinctly was that her sample was not seeking deliberate change in their experience of sexual attraction (though some did report significant change), while our sample all sought such change.

There are two sets of methods employed today by those seeking change in sexual orientation: One set of methods involves professional psychotherapy. These methods are often called reorientation or conversion therapies. Independently, there are religious ministries of various kinds that use a combination of spiritual and psychological methods to seek orientation change. Our study addresses the generic questions of whether sexual orientation is changeable, and whether the attempt is intrinsically harmful, by focusing only on the religiously mediated approaches to change; this is not a study of professional psychotherapy. Our hypotheses for this study were taken directly from the prevailing professional wisdom: We hypothesized 1) sexual orientation is not changeable, and 2) the attempt to change is likely harmful. We already cited the American Psychological Association's (2005) claim that sexual orientation "is not changeable." Regarding harm, our study was framed in light of the American Psychiatric Association's (1998) claim that the "potential risks of 'reparative therapy' are great, including depression, anxiety and self-destructive behavior." The tools of scientific study are ideally suited to investigate empirically such strong, even absolute claims.

We studied a group of men and women seeking sexual orientation change through a religious ministry organization called Exodus. Exodus International (2007) is a worldwide, interdenominational, “Christian organization dedicated to equipping and uniting agencies and individuals to effectively communicate the message of freedom from homosexuality.” It is the largest umbrella organization for Christian ministries to people experiencing unwanted sexual attraction or sexual identity concerns. Exodus seeks to articulate a Christian perspective that neither rejects homosexual persons nor embraces “gay” identity as an acceptable norm. Exodus-affiliated ministries seek to help individuals troubled by their sexual orientation to achieve “freedom from homosexuality through the power of Jesus Christ” (Exodus, 2007).

The methods used to seek change are diverse. Most Exodus-affiliated ministry groups rely on small groups as the primary intervention setting, and the typical methods of intervention are worship, prayer, education and discussion. Some Exodus groups have structured curricula, while others are more unstructured. A variety of additional services are provided through specific groups, including residential programs; seminars; individual, couple and family therapy; support groups for family members; and written materials. Success is defined differently by different programs. Some focus primarily on one’s relationship with God and others, including freedom from codependence in relationships. Other programs define success in behavioral terms, including what it means to achieve celibacy and chastity, while others are concerned with change of thoughts, fantasies and feelings which are seen as leading to change of sexual orientation. The motives behind the various ministries are grounded in the traditional Christian moral teaching disapproving of homosexual conduct.

Funding for this study was provided by two grants from Exodus; we accepted this funding pledging that we would report publicly the results of our outcome study regardless of how encouraging or embarrassing Exodus might find those results. Further, we would also disclose that we share roughly the same basic set of religious commitments as articulated by Exodus, but do not regard that as constituting bias. Researchers in this area often have “positions” on any number of value issues of relevance to their research, and yet competently execute their methodologies and honestly report their findings (Jones & Yarhouse, 2007).

Method

We conducted a prospective, longitudinal study of individuals seeking sexual orientation change using respected self-report measures of sexual orientation and of psychological distress. This is the most rigorous longitudinal methodology ever applied to this question of sexual orientation change and possible resulting harm. This is a naturalistic, quasi-experimental study following subjects pursuing change via methods available in their community, and hence we had no capacity to standardize or otherwise control intervention methods, and our ability to establish rigorous standards for timing of assessments was limited. Use of this quasi-experimental method maximizes external validity while necessarily compromising certain aspects of internal validity and rigor. Such a quasi-experimental methodology is adequate to address the stark hypotheses of the study, it does not allow, however, for rigorous examination of more sophisticated hypotheses such as predictors or probabilities of change, or differential effectiveness of change strategies.

Over half of our sample completed their Time 1 assessment when they had been involved in their specific Exodus ministry for less than a year; these individuals are denoted as “Phase 1” subjects in this study. Because of the challenges we faced in building a large enough subject sample, we enrolled a second group of subjects into the study, those who had been involved in Exodus for one to three years when they were first assessed for our study (denoted Phase 2 subjects). Because enrollment of subjects for the Time 1 assessment involved a challenging process of managing contact with 16 Exodus ministries around the U.S., the time delay between T1 and T2 varied from as short as 8 months to as long as 24 months. The gaps between subsequent assessments were more standardized, approximating a 12 month period between assessments. Thus, the total elapsed time between T1 and T6 varied from 6 to 7 years.

T1 assessments were conducted as face-to-face interviews, with many crucial measures administered as paper-and-pencil “Self-Administered Questionnaires” and mailed to our research office without interviewers seeing the responses according to best practices standards (following Laumann, et al, 1994). We switched entirely to phone interviews and Self-Administered Questionnaires by the T3 assessment because of increasing subject population dispersal.

Previous studies of change have been criticized for using unvalidated and/or idiosyncratic measures of sexual orientation. While a valid concern, this criticism also presumes two things that are highly problematic: 1) that a stable consensus exists around a single definition of sexual orientation, and 2) that there exists a consensus about reliable and valid ways to assess it. There is no such consensus

definition of sexual orientation, and no accepted, singular method to assess it. We will report here on the results that emerge from our use of two scales.

First, we used the seven point self-report Kinsey scale (1948), originally scaled from 0, exclusively heterosexual, through 3, equally heterosexual and homosexual, to 6, exclusively homosexual (we shifted the scaling to a seven point scale from 1, exclusively heterosexual, to 7, exclusively homosexual). We report two variations of the Kinsey: 1) the Kinsey 1-item was the original version asking subjects to describe the population of individuals with which one had had sexual relations (behavior), and 2) a Kinsey Expanded scale that is the average of four Kinsey ratings of behavior, sexual attraction, emotional/romantic attraction, and fantasy.

Second, we used the Shively and DeCecco (1977) scale, which is based on conceiving heterosexual and homosexual attraction to be separate and orthogonal (rather than on a single continuum as for the Kinsey scale). Thus, the Shively and DeCecco scale is composed of four questions that ask for a five-point rating of physical sexual attraction to men and separately to women, and of emotional attraction to men and separately to women. The result is separate ratings (from 1, none, to 5, exclusively) for homosexual and heterosexual orientation.

To test our hypothesis that the attempt to change sexual orientation would result in increased psychological distress, we used a respected measure of subjective distress, the 90-item Symptom Check List-90-Revised (SCL-90-R; Derogatis, 1994). We took as our hypothesis that scores on the SCL-90-R should show significant movement toward worsened functioning or psychological status as a result of Exodus involvement. The SCL-90-R is a strong measure for longitudinal use in both research and clinical settings (Derogatis, 2000; Ambrose, Button, & Ormrod, 1998; Bruce & Arnett, 2008). We will report here on the SCL-90-R's Global Severity Index GSI), a reliable composite measure of the number of symptoms and intensity of distress.

Results

Retention. We began with 98 subjects at T1. Our sample eroded to 73 at T3, a retention rate of 74.5%. This retention rate compares favorably to that of respected longitudinal studies. 63 subjects were interviewed or categorized at T6, for a T1 to T6 6 to 7 year retention of 64%.

Sample characteristics. At Time 1 our sample included 72 men and 26 women. They are highly educated, with 56.1% having finished college and 26.5% having completed some graduate training. They reported a high level of religious involvement, with 50% attending religious services weekly or nearly every week, and 36.7% attending more than once a week. When asked "Would you say you have been 'born again?'" 91.8% said yes. Minimum age for inclusion in this study was 18, but the youngest subject was 21 at T1. The average age was 37.50 years old. This average was older than we had expected, and its significance should be underscored. There is an unflattering caricature that Exodus groups appeal primarily to young, naïve, confused and sexually inexperienced individuals. Such individuals might also be expected to have more optimistic possibilities for sexual orientation change, with older, more sexually experienced persons having more pessimistic expectations for change. This sample was older than the caricature, and more sexually experienced.

Among the 72 male subjects, only 16.7% had not had sex with another man as an adult, and one-third of the male sample had had sex with 30 or more other males. About half of the men had never had sex with a woman, and overall the experience of the male sample of sex with women was considerably less than their experience with male partners. Of the 25 women who gave us meaningful data, only 8% had not had sex with another woman as an adult; 80% of the female sample, had had sex with one to nine other females. The women were less sexually experienced with men than with women; 28% had never had sex with a man.

Two subpopulations. We report our analyses on the experimental population as a whole, but also conducted every analysis on two subpopulations. First, we designated as the Phase 1 subpopulation the 57 subjects (out of the total 98 at T1) who had been in the change process for less than one year at the T1 assessment. These were the individuals who best met our standards for making the study truly prospective by starting our assessments with them as early as possible in the change process. We expected that the results of change would be somewhat less positive in this group, as individuals experiencing difficulty with change would be likely to get frustrated or discouraged early on and drop out.

The second subpopulation was formed to address a frequent criticism of claims of sexual orientation change that anyone who really has changed must not have really been "truly gay" to start with, but rather to have been bisexual. To examine this claim, we developed a set of empirical markers to define a "Truly Gay" subpopulation. These subjects scored above the scale midpoint at T1 for measures of homosexual attraction, *and* for homosexual behavior in the past, *and* for having previously embraced full homosexual or gay identity. We expected that the results of change for the Truly

Gay subpopulation would be less positive, as these individuals would be those more stable in their sexual orientation.

Quantitative analysis of sexual orientation outcomes. We report mostly simple t-tests and Cohen *d* estimates of effect size. We have heard some criticism of our prior report (Jones & Yarhouse, 2007) for failure to report more sophisticated statistical analyses (such as regression analyses) of these data. We do not believe such analyses appropriate for these data given the quasi-experimental nature of the study with less control over timing of assessments. We believe the design of the study and our statistical analyses to be adequate to address the core hypotheses. The design is not adequate for more nuanced research questions about exactly how such change comes about. This latter question would require a more tightly controlled study.

In simplifying this study for verbal presentation, we report only the T1 to T6 findings for some of our quantitative measures. To aid in the interpretation of these findings, we have adopted the convention of reporting mean differences and thus the Cohen *d* effect sizes with a positive valence when the shift is in the direction of less homosexual orientation or more heterosexual orientation, or in the case of SCL scores when the shift is toward less psychological distress. In contrast, mean differences are reported with a negative valence (-) when the shift is in the direction of more homosexual orientation or less heterosexual orientation, or in the case of SCL scores when the shift is toward more psychological distress.

Looking at the Kinsey scores in Table 1, for the whole population we see that the T1 to T6 comparisons for both Kinsey variables were significant and of moderate effect size indicating average movement away from homosexual orientation. For the Phase 1 or rigorously prospective subpopulation, these comparisons did not attain significance. For the Truly Gay subpopulation, the T1 to T6 comparisons were significant and of moderate effect size indicating average movement away from homosexual orientation. The changes reported here for the whole population and the Truly Gay subpopulation appear to be respectably large changes compared to other studies of, for instance, drug effects or the results of psychotherapies. These effect sizes assume considerably more significance in light of the fact that we are reporting change on a dimension of human functioning that is supposed to be immutable.

Table 1: *Kinsey Scores (scaled 1 [exclusively heterosexual] to 7 [exclusively homosexual]) for Three Populations*

	Time 1 Mean	Time 6 Mean	Mean Diff.	Std. Dev.	t score	2-tailed sig.	Cohen *d*
Whole Population (N)							
1. Kinsey 1-item Time 1 to 6 (61)	5.03	4.20	0.84	2.66	2.46	0.017	0.429
2. Kinsey Expanded Time 1 to 6(62)	4.97	4.42	0.55	2.14	2.01	0.049	0.330
Phase 1 Subpopulation (N)							
3. Kinsey 1-item Time 1 to 6 (29)	4.52	4.72	-0.21	2.47	-0.45	0.655	
4. Kinsey Expanded Time 1 to 6 (29)	4.87	4.83	0.04	2.25	0.09	0.929	
Truly Gay Subpopulation (N)							
5. Kinsey 1-item Time 1 to 6 (35)	5.60	4.37	1.23	2.96	2.45	0.019	0.640
6. Kinsey Expanded Time 1 to 6 (36)	5.56	4.67	0.89	2.17	2.47	0.019	0.588

The Shively and DeCecco (S-D) scale obtains separate ratings of heterosexual and homosexual orientation. The S-D results in Table 2 indicate some average change in the direction intended by the Exodus process, specifically, movement toward less homosexual attraction and toward more heterosexual attraction. For the whole population, the T1 to T6 change away from homosexual attraction attained significance and moderate effect size, while the change toward heterosexual attraction did not attain significance. Neither of the T1 to T6 changes attained significance for the Phase 1 subpopulation. For the Truly Gay subpopulation, the T1 to T6 change away from homosexual attraction attained significance and a large to moderate effect size, while the change toward heterosexual attraction attained significance and a moderate effect size. Note that changes *away* from or the diminishing of homosexual orientation appear of larger absolute magnitude than changes *toward*

heterosexual orientation. It would appear, then, that while change away from homosexual orientation is related to change toward heterosexual orientation, the two are not identical processes.

The general picture that emerges from these data is that on a number of standardized measures of sexual orientation, this population experienced statistically significant change away from homosexual orientation. Results reported here for the Phase 1 subpopulation (those in the change process for less than one year at the Time 1 assessment) were nonsignificant. Our most surprising single finding, and one that is replicated over several different measures, is that the Truly Gay subpopulation population experienced more significant change.

Table 2: *Shively and DeCecco (S-D) Ratings for the Three Populations*

	Time 1 Mean	Time 6 Mean	Mean Diff.	Std. Dev.	t score	2-tailed sig.	Cohen d
Whole Population (N)							
1. S-D Heterosex Time 1 to 6 (62)	2.50	2.85	0.35	1.69	-1.62	0.111	
2. S-D Homosex Time 1 to 6 (62)	3.80	3.09	0.71	1.48	3.77	0.000	0.604
Phase 1 Subpopulation (N)							
3. S-D Heterosex Time 1 to 6 (29)	2.52	2.57	0.05	1.61	-0.17	0.864	
4. S-D Homosex Time 1 to 6 (29)	3.95	3.55	0.40	1.62	1.32	0.199	
Truly Gay Subpopulation (N)							
5. S-D Heterosex Time 1 to 6 (36)	2.24	2.78	0.54	1.63	-1.99	0.054	0.477
6. S-D Homosex Time 1 to 6 (36)	4.01	3.14	0.88	1.56	3.36	0.002	0.785

Outcomes for harm. Following prevailing professional wisdom, our hypothesis was that involvement in the orientation change process should result in worsening psychological distress outcomes on average on the SCL-90-R. Our analysis yielded no support for this hypothesis. The global severity index or GSI did not show any indication on average of increasing psychological distress. The results in Table 3 do manifest significant changes for the whole and Truly Gay subpopulations, both in the moderate effect size range, and both indicating improved psychological status.

Table 3: *Symptom Checklist-90 (SCL-90) General Severity Index (GSI), Positive Symptom Distress Index (PSDI), and Positive Symptom Total (PST) Scores for the Three Populations by Non-Patient Norms*

	Time 1 Mean	Time 6 Mean	Mean Diff.	Std. Dev.	t score	2-tailed sig.	Cohen *d*
Whole Population (N)							
1. SCL GSI Time 1 to 6 (59)	57.86	54.22	3.64	10.04	2.79	0.007	0.330
Phase 1 Subpopulation (N)							
2. SCL GSI Time 1 to 6 (27)	59.00	55.81	3.19	11.28	1.47	0.154	
Truly Gay Subpopulation (N)							
3. SCL GSI Time 1 to 6 (36)	58.75	53.72	5.03	10.91	2.77	0.009	0.438

We then examined a more rigorous hypothesis. Recognizing that some might hypothesize that the increasingly good mental health of those who had embraced gay identity might be masking (by averaging out) the decaying mental health of those seeking change, we analyzed our data again including only those subjects who reported continuing down the path of sexual orientation change at T6 by either reporting themselves to be in one of the two qualitative success categories or to

be continuing the change process despite limited success. If the attempt at the change process was going to be harmful, this harm should show up among those continuing to pursue change over a period of six years or more years. Contrary to these expectations, we found no evidence of movement toward increased distress on average as a result of Exodus involvement. Table 4 shows that the GSI scores moved toward less distress T1 to T6, attaining significance and a moderate to small effect size.

Table 4: *Symptom Checklist-90 (SCL-90) General Severity Index (GSI), Positive Symptom Distress Index (PSDI), and Positive Symptom Total (PST) Scores for the Three "Success/Continuing" Populations by Non-Patient Norms*

	Time 1 Mean	Time 6 Mean	Mean Diff.	Std. Dev.	t score	2-tailed sig.	Cohen *d*
1. SCL GSI Time 1 to 6 (40)	55.90	52.88	3.03	8.74	2.188	0.035	0.301

Qualitative analysis of sexual orientation outcomes. Jones and Yarhouse (2007) classified 69 out of 73 T3 subjects into one of six qualitative outcome categories based on the transcripts of the open-ended questions asked of each participant about their sexual attractions, experiences and identity, and their own judgment about whether change had been successful:

- "Success: Conversion": Subjects who reported change to be successful by experiencing substantial reductions in homosexual attraction and substantial conversion to heterosexual attraction and functioning.
- "Success: Chastity": Subjects who reported change to be successful and who reported homosexual attraction to be present only incidentally or in a way that does not seem to bring about distress, allowing them to live contentedly without overt sexual activity.
- "Continuing": These persons may have experienced modest decreases in homosexual attraction, but were not satisfied with their degree of change and remained committed to the change process.
- "Non-Response": These persons had experienced no significant sexual orientation change; they had not given up on the change process, but may be confused or conflicted about which direction to turn next.
- "Failure: Confused": These persons had experienced no significant sexual orientation change, and had given up on the change process but without yet embracing gay identity.
- "Failure: Gay Identity": These persons had given up on the change process and embraced gay identity.

At T6, qualitative categorization was not made by researcher assignment; rather, subjects self-categorized based on a written description of the six categories. The results are displayed in Table 5. A total of 61 cases could be categorized at T6. We can illustrate these findings by moving down a representative column, using Column 2 for the Success: Chastity subjects as the example. At T3 there were 17 of these subjects, 23% of the 73 total T3 subjects. In Row 2 we see that of the 17 subjects who were Chastity cases at T3, 9 remained in that category at T6 (what we call "stable" in the table), while 2 moved to the left into Success: Conversion but 5 moved right toward less successful outcomes in Exodus's terms. This accounts for 16 of 17 T3 subjects, the other subject was not categorized at T6. We see in Row 3 that 18 subjects self-categorized as Success: Chastity subjects at T6, which was 30% of the 61 total T6 cases. Of this 18, 9 of these Chastity outcome cases were categorized as Truly Gay, and 6 were Phase 1 subjects.

***Table 5:** T3 and T6 Qualitative Outcome Categorizations*

	Col. 1: Success: Conver- sion	Col. 2: Success: Chastity	Col. 3: Con- tinuing	Col. 4: Non- Respons e	Col. 5: Failure: Confuse d	Col. 6: Failure: Gay Identity
Disposition of T3 Cases						
1: T3 Categorization (N=69)	11 (15%)	17 (23%)	21 (29%)	11 (15%)	3 (4%)	6 (8%)
2: Directionality of categorization shifts of old cases from T3 to T6, based on T3 categorization	8 stable (73%) 1 →	9 stable (53%) ← 2 5 →	2 stable (10%) ← 7 5 →	1 stable (9%) ← 3 4 →	1 stable (33%) ← 1 1 →	4 stable (67%) ← 1
T6 Categorizations						
3: Total T6 cases by T6 self-categorization (sum rows 8-10); 61 total categorized	14 (23%)	18 (30%)	10 (16%)	4 (7%)	3 (5%)	12 (20%)
4: T6 Truly Gay (TG) and Phase 1 cases and percentages by category	8 TG (57%) 5 Phase 1 (36%)	9 TG (50%) 6 Phase 1 (33%)	4 TG (40%) 4 Phase 1 (40%)	4 TG (100%) 2 Phase 1 (50%)	3 TG (100%) 2 Phase 1 (67%)	7 TG (58%) 10 Phase 1 (83%)

Several results are particularly notable. Despite a smaller N for the T6 sample than at T3, we found growth in absolute size in the two Exodus “success” outcome groups moving from row 1 to row 3: Conversion cases grew from 11 to 14 and Chastity cases from 17 to 18. But the group that grew the most in absolute and proportional terms was Failure: Gay Identity which doubled in absolute size from 6 to 12. The percentage of those showing stability of outcome T3 to T6 (row 4) is greatest in columns 1 and 6: the Success: Conversion (73%) and Failure: Gay Identity (67%) categories, with slightly less in the Success: Chastity category (53%). Of the one subject each that shifted from the Success: Conversion and Failure: Gay Identity categories from T3 to T6, each moved to the Continuing category at T6. The largest absolute shift from T3 to T6 of those who participated in the T6 interview was a T3 Success: Chastity case that became a Failure: Gay Identity case; next largest was a Non-Response case at T3 that became a Success: Conversion case.

Most germane to our principal hypothesis that change of sexual orientation is not possible, 53% of the T6 sample of 61 cases that self-categorized (row 3) did so as some version of success, either as Success: Conversion (23%) or Success: Chastity (30%). At T6, 25% of the sample self-categorized as an Exodus failure (Confused or Gay Identity).

Finally, we see a continuation and extension of the patterns we saw at T3 for Phase 1 and Truly Gay subpopulations (row 4). Results for the Truly Gay subjects continue to be similar to or better than those of the whole population. It is notable that there is roughly the same percentage of Truly Gay subjects in the Success: Conversion and Failure: Gay Identity categories. Contrary to our original predictions, Truly Gay status (i.e., more definitive homosexual attraction, extensive homosexual behavior experience, and embrace of gay identity) appears not to contraindicate the possibility of change. On the other hand, there does appear to be a notable trend for Phase 1 subjects to be disproportionately represented among the more negative outcomes for Exodus, suggesting that Phase 1 outcomes (i.e., outcomes for those who were inducted into the study early in their change venture) are less positive than for the subject population as a whole. This may indicate that 1) positive outcomes for those first initiating the change process are likely less positive than the overall findings of this study would suggest, 2) that the change process is difficult and requires extraordinary persistence to attain success, or 3) numerous other possibilities. In any case, there are Phase 1 subjects in all outcome categories, which is contrary evidence to the hypothesis that sexual orientation is not changeable.

Discussion

Our first hypothesis was that sexual orientation is not changeable. If we take change to mean a reduction in homosexual attraction and an increase in heterosexual attraction, we found considerable evidence that change of sexual orientation occurred for some individuals through involvement in the religiously-mediated change methods of Exodus Ministries (23% by self-categorization). Those who

report a successful heterosexual adjustment regard themselves as having changed their sexual orientation.

For conventionally religious persons, a successful outcome may also be a reduction in homosexual attraction and behavioral chastity (30%). Although this outcome may not be regarded as change of orientation to some, those who report chastity regard themselves as having reestablished their sexual identities in some way other than by their homosexual attractions. No data emerging from this study suggests that this is a maladaptive or unsustainable outcome.

If chastity is considered a positive outcome, at least by values and moral beliefs of the participants, how does this profile of outcomes measure up? It is notable first that the proportion of subjects that must be considered unequivocal successes (Conversion) increased from 15% of the sample at T3 to 23% of the sample at T6. Combined with the Chastity outcome subjects, 53% of the T6 sample attained a form of what these individuals consider a successful outcome, this compared to a total of 38% of such successful outcomes at T3. An additional 16% continue six and seven years later to pursue change, and appear to have derived enough benefit from the change attempt to continue down this challenging path despite not attaining the outcomes they desire.

On the other hand, the outcomes that are regarded by Exodus as "failures" are not so regarded by many in the professional community. The Failure: Gay Identity outcome cases are not properly analogous to failures or relapses to worsened conditions. This outcome array (53% some version of success; 16% continuing, 20% benign outcomes opposite the intended change effect) would be regarded as respectable in the mental health field applied to other phenomena. Interventions such as psychotherapy or drug treatments always have successes, improvers, nonresponders and some negative outcomes. Is this array of outcomes rightfully regarded as problematic?

What would be the most pessimistic prognostication of outcomes in sexual orientation change one could make from this data? If one assumed that only the Phase 1 subjects were valid representatives of a true prospective study (which might be true), and that all missing cases were failures (which we know not to be true), one could conclude that from 57 initial Phase 1 subjects, only 5 attained Success: Conversion status (9%), 6 attained Success: Chastity (11%), and 4 attained Continuing status (7%). One could further insist that only Success: Conversion status represents a successful outcome rigorously construed. By these standards, only 9% of the sample attained success. On the one hand, this outcome still refutes the claim that sexual orientation is not changeable; on the other, we must ask whether this is an adequate outcome ratio for an individual to strive after change.

There is also the question of sexual identity change versus sexual orientation change (see Worthington & Reynolds, 2009). Recent theoretical (e.g., Yarhouse, 2001) and empirical (e.g., Beckstead & Morrow, 2004; Yarhouse & Tan, 2004; Yarhouse, Tan & Pawlowski, 2005; Wolkomir, 2006) work on sexual identity among religious sexual minorities suggests that attributions and meaning are critical in the decision to integrate same-sex attractions into a gay identity or the decision to dis-identify with a gay identity and the persons and institutions that support a gay identity. In light of the role of attributions and meaning in sexual identity labeling, is it possible that some of what is reported in this study as change of orientation is more accurately understood as change in sexual identity? An interesting observation about these data is that most of the change that was reported on the self-report measures occurred early in the change attempt. Our previous report (Jones & Yarhouse, 2007) indicated that this change occurred between T1 and T2, and that the shift that occurred was sustained through T3. The current data suggest such change can be sustained through T6 for those who report successful change. These findings go against the common argument that change of orientation is gradual and occurs over an extended period of time. Some may see these results as reflecting not a change in sexual orientation for most participants who reported such change, but rather a change in sexual identity. Such a change might result from how one thinks of oneself and labels one's sexual preferences (that is, attributions and meaning-making). This might also explain to some why the Truly Gay subpopulation showed more dramatic change, as their shift was away from a more pronounced gay identity. Such a departure may have been measured as a greater movement away from something that had previously been more salient to them.

It is possible that this data reflects *both* persons who experienced a more powerful change in orientation as well as persons who experienced a change in sexual identity. The shift itself appeared to be consolidated and sustained over time for those who reported a successful outcome at T6. It certainly appears from this data that the process is complex and multifaceted.

Our second hypothesis was that the attempt to change sexual orientation is intrinsically harmful, and hence harmful on average. We found no

evidence that the attempt to change sexual orientation was harmful on average for these individuals. Indeed, the persons in our study who have continued with the pursuit of "reorientation" unstintingly over the extended time frame of this study, six to seven years or more, showed modest gains in the diminishing of psychological distress. Despite these findings, we cannot conclude that particular individuals in this study were not harmed by their attempt to change. Specific individuals may claim to have experienced harm from the attempt to change, and those claims may be legitimate, but while it may be that the change attempt caused harm by its very nature as an attempt to change orientation, it may also be that the harm was caused by particular intervention methods that were inept, harsh, punitive or otherwise ill-conceived, and not from the attempt to change itself. Our findings mitigate against any absolute claim that attempted change is very likely to be harmful in and of itself.

The logic of scientific inquiry drives us, based on our results, to reject both hypotheses and to conclude that sexual orientation may be changeable for some, and that the attempt to change sexual orientation is *not* harmful on average. The implications of these findings, and of their limitations, merit elaboration. First, we regard the present sample to be adequate to rebut the claim that change is impossible. Refutation of an absolute claim requires only substantive evidence that the absolute prediction fails to hold. The pattern of outcomes documented here is suggestive of the possibility of change but not adequate to make firm predictions of likelihood of change. While this study reports on arguably the best, most representative sample of subjects ever studied seeking change via religious means, we cannot affirm that it is scientifically representative. We do not know what such a representative sample would look like, as this is a rarely studied or even acknowledged population.

Second, the change results documented in this study are generated by a set of diverse, religiously-based intervention programs. The diversity of the methods implemented by the various of the 16 ministries from which we obtained subjects, combined with the size of our sample, leaves us unable to determine or even speculate on the nature of the process of change or to discriminate active from inactive elements of the intervention methods.

Third, the present findings do not speak directly to the issue of the effectiveness of professionally based psychotherapy interventions, what are commonly called reorientation or conversion therapies. However, to the degree that the contemporary mental health field regards such conversion therapies as discredited on the presumptive basis that it is in fact impossible to change sexual orientation, these results may and perhaps should open the door for a reconsideration of the efficacy of such therapies.

In addition to clarifying what we found, it is equally important to clarify what we did not find. First, we did not find that everyone can change. Saying that change is not impossible in general is not the same thing as saying that everyone can change, that anyone can change, or that change is possible for any given individual. Second, while we found that part of our research population experienced success to the degree that it might be called (as we have here) "conversion," our evidence does not indicate that these changes are categorical, resulting in uncomplicated, dichotomous and unequivocal reversal of sexual orientation from utterly homosexual to utterly heterosexual. Most of the individuals who reported that they were heterosexual at T6 did not report themselves to be without experience of homosexual arousal, and they did not report their heterosexual orientation to be unequivocal and uncomplicated.

We would highlight the two most important implications of this study. First, the American Psychological Association has for years acted strongly in the realms of professional and public policy to protect the welfare of gay, lesbian and other persons against prejudice and ignorance, and against hurtful and ineffective interventions. As a scientific and professional organization, the APA also has adhered for years to the Leona Tyler Principle (Tyler, 1969; Cummings, 2005, p. xiv) directing that its public advocacy should be constrained by a commitment to a substantive base of high-quality empirical research complemented by professional and value consensus. Our data adds to that of similar studies in the past suggesting that the APA's prior declaration that sexual orientation is "not changeable" and expressions of grave concerns for likely harm caused by the attempt to change were to some extent overstated. We thus are pleased that since the release of the earlier report of our findings more restrained statements have been issued by the APA. Examination of these issues must continue.

The second implication is the importance of respecting the self-determination of individuals who, because of their personal values, religious or not, desire to seek change of their sexual orientation just as we respect those who desire to affirm and consolidate their sexual identity as gay. The findings from this study support keeping a range of professional and ministry options open to clients who experience same-sex attraction, are distressed by this because of their moral or religious beliefs, and who may benefit from hearing about a number

of intervention modalities. Options may include change of orientation, integrating same-sex attractions into a gay identity, and options that focus more on identity and living in ways that reflect one's beliefs and values. We would do well to put as much information in the hands of the consumer so that they are able to make informed decisions and wise choices among treatment options (see Gonsiorek, 2004; Haldeman, 2004; Yarhouse, 1998).

In conclusion, the findings of this study would appear to contradict the commonly expressed view of the mental health establishment that sexual orientation is not changeable and that the attempt to change is highly likely to produce harm for those who make such an attempt.

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