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Fear of Love Online:

The Effect of Religious Salience on the Early Adoption of Online Dating (2000-2005)

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Abstract:

From 2000 to 2005, online dating became a more viable option for mate selection and its usage boomed. The early adoption period of new technology (e.g., online dating) often is vital for new behavioral norms to spread, and it also provides an important historical context for examining how social groups respond differently to sudden changes in dating, marriage, and the family. This paper examines a specific social group that failed to adopt online dating during its early development: those who identify as very religious. Examining a nationally representative sample of Internet users who were single at some point from 2000 to 2005 (*N*=910), this study finds that those with high religious saliency were less likely to attempt online dating, despite its boom in popularity at the time. Mistrust of online dating websites partially explains this relationship, while religious attendance does not. This reflects a long history of very religious individuals resisting secular social changes to traditional patterns of dating, marriage, and the family. However, as religious individuals adapt and negotiate boundaries with secular culture over time, it is possible that online dating may become a more viable option for the very religious under certain conditions, which this article later discusses.

As Internet access became widely available in the early 2000s (Day, Janus, and Davis 2005), and the population of singles continued to grow (Fields and Casper 2000), online dating websites experienced a dramatic "boom" in its usage, particularly from 2000 to 2005 (Rosenfeld and Thomas 2012). In 1999, only 2 percent of American singles had used some form of online dating, but by 2002, around 25 percent of single adults had used online dating (Orr 2004). During this time, eHarmony (est. 2000) launched and introduced compatibility matching based on mathematical algorithms, which other dating websites also began to adopt (Finkel et al. 2012). By 2005, 37 percent of single Internet users looking for a romantic partner visited a dating website (Madden and Lenhart 2006). During this period, approximately 22 percent of heterosexual couples in the United States formed as a result of online dating, highlighting the growing importance of Internet for

mate selection and the decreasing influence of family and friends as social intermediaries (Rosenfeld and Thomas 2012).

The online dating boom from 2000 to 2005 provides an important historical context to study sudden social changes in dating and its response among different social groups. By studying those who adopted and those who resisted online dating during its crucial development in the early 2000s, it can help develop theory with regard to how social groups respond differently to strong social changes in dating, marriage, and the family from a historical standpoint. Moreover, studying the early adoption period of online dating allows one to revisit "missed opportunities" with regard to the normative acceptance of online dating. Compared to the online dating boom from 2000 to 2005, the usage of online dating among single Internet users and its prevalence in helping form marriages have slowed considerably (Rosenfeld and Thomas 2012; Smith and Duggan 2013), though attitudes/familiarity with online dating have improved (Smith and Anderson 2015; Smith and Duggan 2013). Because the early period of adopting new dating practices (e.g., online dating) can be crucial for its normative acceptance and the rate of social change (Fallows 2004; Orr 2004; Sautter et al. 2010), it is important to reconsider how the early adoption/resistance of online dating may have impacted the current state of online dating and suggest under what conditions specific groups that previously resisted online dating may eventually accept it, which would further spread the normative acceptance of this new dating practice.

For these reasons, this article focuses on an important social group who failed to adopt online dating during its pivotal boom from 2000 to 2005: those who identify as being religious (i.e., those with high religious saliency). Research has shown how those who identify as very religious are unique in how they approach dating, marriage, and the family (Dollahite, Hawkins, and Parr 2012; Goodman and Dollahite 2006; Lambert and Dollahite 2008; Mahoney et al 2001), and given that 43 percent of American Internet users identified as very religious during the online dating boom (see Madden and Lenhart 2006: 12), this group can have a sizable impact on the normative acceptance of online dating. Nonetheless, this group has been ignored, and the importance of religion in online dating has been absent in many popular studies on the early adoption of online dating (see Finkel et al. 2012; Rosenfeld and Thomas 2012; Sautter et al. 2010). As a corrective, this article seeks to test the impact of religious salience on the early adoption of online dating (2000-2005) and to test potential explanations for why the very religious may have refrained from using dating websites at a time where the new technology suddenly became very popular. By understanding why online dating failed to take off among the very religious, it is possible to assess under what conditions online dating might eventually become normative for this group in the future, which would lead to more growth in the overall usage of online dating.

RELIGIOUSNESS & FAMILY CHANGES OVER TIME

The advent of online dating reflects a historical transition away from traditional communal obligations in pre-marital/marital decision-making and toward greater individual autonomy. Prior to the Industrial Revolution in the mid-19th-century, marriage and the family were strongly controlled by social norms and regulations to ensure that basic economic needs were met (Coontz 2005). The parents of both potential marriage partners and the community were heavily involved in marital decisions. However, as society began to experience greater economic prosperity in the 19th and 20th century, individuals began seeking greater autonomy and personal freedom in both courtship as well as marital choices in order to ensure the greatest potential for self-fulfillment (Amato 2009; Turner 2003). Who, how, and when to marry increasingly became a decision of the individual, and marital/pre-marital choices became largely deinstitutionalized (Cherlin 2004). As a result, "traditional" family patterns have been replaced with rises in divorce, cohabitation, intermarriage, and age at first marriage since the mid-20th-century (Carlson & Meyer, 2014; Cherlin 2010; Kalmijn 1998).

Despite these social changes, those who are very religious tend to exhibit higher resistance toward adopting these new practices. Those with high religiosity tend to be more traditional in the sense that they have lower rates of divorce (Mahoney et al. 2001), stronger anti-divorce attitudes (Marks 2004), lower rates of cohabitation (Eggebeen and Dew 2009; Thornton, Axinn, and Hill 1992), lower rates of interfaith marriage (Putnam and Campbell 2010), and earlier ages at first marriage (Rendon et al 2014; Uecker and Stokes 2008). Religious institutions tend to support traditional notions of family and marriage (Edgell 2005; Xu et al., 2005). Moreover, since valuing religion also can be understood as valuing a tradition to a certain extent, it is not surprising that the very religious tend to exhibit higher rates of traditionalism.

With that being stated, both religious individuals and institutions appear to adapt to social changes over time and make greater accommodations (Edgell 2005). While the initial reaction to increasingly lenient divorce laws was very negative by the very religious in the 1970s, the effect of religiousness on anti-divorce attitudes has weakened since then (Martin and Parashar 2006), and even more conservative groups, like Evangelical Protestants, have created more programs for divorced/single members (Edgell 2005). Moreover, approximately one-third of religiously inclined youth still choose to cohabit (Eggebeen and Dew 2009), which is far higher than the six percent of marriages in late 1960s who chose to cohabit before their wedding (Kuperberg 2010). Lastly, the very religious still marry later in life compared to what was normal in the past. Although most individuals married before the age of 23 in the 1950s and 1960s (Turner 2003: 160), the vast majority of highly religious men and women do not marry before age 23 (Uecker and Stokes 2008). This does necessarily support notions of secularization, as religion has a long history of negotiating with and accommodating the surrounding secular culture. Instead,

¹ For example, the early Christian church emphasized asceticism and feared that marriage would distract from attention given to God (Mount 1992). Nonetheless, marriage, which was popular in non-Christian communities, was seen as a "concession" to the fallen nature of humans (Kay 1972). Now, many religious communities see marriage as a sacred union,

religious individuals and institutions learn to negotiate boundaries with secular culture over time and establish conditions under which accommodations are appropriate (Edgell 2005). Although there tends to be a perpetual level of resistance to secular changes in the family based on one's religiousness, the level of resistance tends to be the greater early in the process of social change, and then less powerful as the religious adapt to these changes and learn better negotiation tactics.

Given the general inclination to traditionalism in marital/pre-marital choices among the very religious, which is particularly strong when social changes first begin to occur, one should expect a high level of resistance to new dating practices, like the rise of online dating in the early 2000s for mate selection. Evidence from a 2006 Pew Internet report suggests that this might be the case. Examining the characteristics of the online dating community at the time, the report found that less than 30% of online daters identified as religious (Madden and Lenhart 2006: 12). Given how religious dating websites like JDate and ChristianMingle make up a very small fraction of online daters,² and eHarmony's religious founder decided to cater the website toward more secular users (Slater 2013), this finding should not be a surprise. However, this descriptive finding still needs further elaboration. Besides not controlling for any other factors, it is possible that this finding simply reflects the average religious salience among other singles with Internet access, which the report did not examine. Because of this, the present study tests the following hypothesis:

Hypothesis #1: Single Internet users with high religious saliency are less likely to visit a dating website.

WHY NOT ONLINE DATING?

Though traditionalism seems to play a broad role in why religious individuals tend to resist changes in dating and marriage, there are usually particular reasons used to justify such resistance. A long history of anti-divorce sentiment dating back to the early Christian Church, as well as various religious scriptures condemning divorce, explain why the highly religious tend to strongly oppose divorce (Kay 1972; Mount 1992). In terms of cohabitation, its implicit connection with premarital sex makes it problematic for those with religious backgrounds (Eggebeen and Dew 2009). Also, the very religious tend to marry early because they place a strong emphasis on marriage and desire to marry sooner rather than later (Ellison, Burdette, and Glenn 2011). In the context of this study, there may have been particular reasons why the highly religious chose to avoid the early adoption of online dating despite its boom in popularity during the early 2000s. One explanation is that the very religious perceive online dating as too dangerous and risky, as it fails to meet the

valued and guided by God (Dollahite, Hawkins, and Parr 2012; Goodman and Dollahite 2006; Lambert and Dollahite 2008)

² ChristianMingle is the largest niche dating website, but only makes up 2 percent of all online daters (Smith and Duggan 2013).

numerous conditions they establish to ensure a successful romantic partner. Another potential explanation is that religious attendance is important, for congregations offer potential opportunity for alternative partners. Hence, the former explanation is tied to the negative perception of online dating, whereas the latter explanation is tied the lack of necessity for dating websites. Both the mistrust of online dating and religious attendance are tested as in order to explain the relationship between religious salience and online dating.

Dating in Religious vs. Secular Contexts

The topic of romantic dating has been an important topic in religious circles. Whereas religious communities can regulate things like divorce and sexual behavior based on historical precedents and religious scriptures, they often wrestle with modern dating practices given the lack authoritative resources to guide their dating decisions (Irby 2013). Some Christian circles promote a return to "courtship" practices prominent prior to the 20th century, whereby the explicit goal is marriage from the beginning and the families of both romantic partners are involved in the romantic process (see Chediak et al. 2005; Harris 2000). This suggestion clearly reflects the traditionalism commonly espoused by the very religious. Another option is to "date in a holy way," based on religious values and explicit boundaries (Cloud and Townsend 2000: 11). The latter strategy still finds marriage to be an ideal outcome, but it does not put as much marital pressure on dating partners.

Despite this debate among the very religious, the various approaches to dating share a common goal of resisting the goals and practices of secular culture. Specifically, dating should not be: based on sexual "hookups," non-committal, individualistic, and nonspiritual (Irby 2013). First, the very religious seek to avoid the "hookup" culture among young adults (Wilkins 2008), where encounters with strangers lead to sexual experiences with little relationship commitment (Bogle 2008; England et al. 2008). Given the strict bylaws against premarital sex in religious communities (see Turner 2003), anything that potentially leads to a sexual "hookup" should be avoided and be replaced with "wholesome" interactions (Bartkowski, Xu, and Fondren 2011: 250). Second, dating should not be casual and aimless, but it ideally should lead to marriage (Irby 2013). Those with high religiosity put a higher emphasis on marriage and view marriage as a likely outcome for them in the near future (Ellison, Burdette, and Glenn 2011). Third, dating should entail involvement by one's community (e.g., friends and family) to a certain degree (Irby 2013). This provides social support and guidance during the dating process, and may help to ensure a successful dating relationship. And fourth, the potential romantic partner should also place a high emphasis on religious faith, as to not be "unequally yoked" (2 Corinthians 6:14). The avoidance of sex, importance of marriage, involvement of community, and emphasis on shared religious faith help the highly religious to establish guidelines for an otherwise unregulated social practice and reduce fears of potential emotional and spiritual damage (see Harris 1997, 2000).

In contrast, online dating fails to meet any of the high standards the highly religious place on dating, making its use somewhat risky. First, it has strong implicit connections with the secular "hookup" culture. Online dating is commonly viewed as the Internet

version of "personal advertisements", which traditionally were listed in the back of newspapers next to sex hotlines and escort services (Orr 2004). With the advent of the Internet, fears of anonymous people seeking sex through dating websites became prominent, and to be sure, sex certainly is one of many goals that online daters tend to report (Couch and Liamputtong 2008), though there are multiple purposes for online dating (Clemens, Atkins, and Krishnan 2015). Second, the casual usage of online dating among young adults makes it hard to appease more marriage-oriented religious adults. Though it differs by the website, marriage is not a commonly listed reason for using online dating (Clemens, Atkins, and Krishnan 2015). Third, online dating is very individualized and fails to incorporate the importance of community that the highly religious value in their dating strategies. And fourth, it is hard to verify how committed the other online dater is to religious faith without knowing him/her personally. The stereotype of predators and "psychos" on dating websites has existed since the 1990s (Gwinnell 1998), and though websites like JDate and ChristianMingle exist for those who desire a same-faith partner, the stereotype of untrustworthy strangers on the Internet remains a stumbling block for many religious individuals who remain skeptical of online dating as a viable mate selection medium (see Tweedle 2011). Because online dating fails to meet many of the common standards among religious singles, its usage is risky and perhaps too dangerous to embrace. For this reason, the following hypothesis will be tested:

Hypothesis #2: Mistrust of online dating partially explains the relationship between religious salience and visiting a dating website.

Religious Attendance

While the mistrust of online dating suggests that negative attitudes explain the relationship between religious salience and the early use of online dating, it is possible that high religious attendance offers sufficient opportunities to meet alternative partners, making online dating simply unnecessary. Traditionally, romantic relationships formed as a result of third parties (Coontz 2005), and given the high propensity for traditionalism among the very religious (Edgell 2005; Xu et al., 2005), it is possible that religious singles may desire a traditional "third party" mate selection strategy. In this case, religious congregations and its adherents may operate as an important third party given the importance of the religious community in the lives of the very religious (Cornwall 1987). Congregations and their adherents may influence relationship initiation by offering opinions on potential partners, arranging introductions, and serving as a romantic pool for available singles. Because the opinions and practices of congregations are often infused with transcendental qualities (Berger 1967: 38), the very religious may view fellow religious adherents as trustworthy sources for opinions on potential romantic partners. Moreover, some places of worship may offer single adults access to "marriage-oriented events" (Burdette 2012), allowing regular attenders the opportunity to meet and date other single adults in their congregation without the need for dating websites. Meeting through congregational events may serve to find partners who share common important goals, like religious faith and the importance of marriage (Irby 2013). Indeed, romantic partners who meet though their religious congregation are less likely to break up compared to those who meet through other contexts (Rosenfeld and Thomas 2012), making the religious congregation a viable mate selection strategy for long-term relationships.

However, in order to access these resources, one must be embedded in one's congregation or risk receiving the label of a "free rider" (Iannaccone 1992). Given that religious attendance signifies embeddedness in a religious community (Stroope 2012), the very religious should attend more religious services and have a greater opportunity for dating alternatives, voiding the necessity of online dating as a mate selection strategy. Because of this, the following hypothesis will be tested:

Hypothesis #3: Religious attendance partially explains the relationship between religious salience and visiting a dating website.

METHOD

The data utilized in this analysis are from a late 2005 telephone survey performed by the Pew Internet & American Life Project, a subsection of the Pew Research Center. Princeton Survey Research Associates International, working on behalf of Pew Internet, used random-digit dialing to construct a nationally representative random sample of 3,215 adults, ages 18 and older. Although the response rate was 28 percent for the survey, the dataset includes a weight based on Census data to correct for nonresponse and account for various discrepancies between the sample and the population parameter. For more information, see Madden and Lenhart (2006).

The analytical sample for this study includes respondents who are Internet users and have been single at some point from 2000 to 2005, the target population for online daters since the online dating "boom" in 2000. This is the same strategy that other researchers have used in studies on the use of online dating in the 2000s (Rosenfeld and Thomas 2012; Sautter et al. 2010). As previously mentioned, this early adoption period is crucial to the growth of this new dating norm across social groups, for early users function as "evangelists" for social change and help change the perception of online dating as a place for "psychos" and "perverts" to a normative practice (Orr 2004; Sautter et al. 2010).

The analytical sample for the study has 910 cases, and list-wise deletion was used to handle missing data. The target population for the study included 1,057 cases, but shrank to 910 cases because of missing data. Although one may worry about potential bias, a preliminary analysis using multiple imputation (MI) produced the same substantive results prior to mediation testing. Since postestimation commands are limited in MI, specifically the KHB method used to test mediation, list-wise deletion was used instead. See Table 1 for the characteristics of the general sample, target population for online dating, analytical sample, and the online dating community.

Table 1. Descriptive Statistics

	All Respondents Single Internet Users		Analytical Sample		Online Daters			
	N	Mean	N	Mean	N	Mean	N	Mean
Sample Size	3,215	_	1,057	_	910	_	168	_
Gender								
Female	3,215	51.7%	1,057	49.8%	910	50.5%	168	46.9%
Race								
Black	3,146	11.8%	1,040	14.1%	910	13.8%	168	14.6%
Other	3,146	9.1%	1,040	10.6%	910	10.5%	168	9.6%
Age	3,107	45.9	1,032	36.4	910	35.9	168	34.7
Education								
Less than HS	3,187	12.9%	1,053	8.6%	910	8.9%	168	9.0%
Some College	3,187	26.7%	1,053	33.9%	910	33.2%	168	32.3%
BA/BS +	3,187	27.0%	1,053	28.5%	910	27.2%	168	30.0%
Income								
< \$30,000	3,215	28.2%	1,057	32.3%	910	33.0%	168	27.9%
\$75,000 +	3,215	20.8%	1,057	18.7%	910	18.6%	168	22.7%
Missing	3,215	19.4%	1,057	13.3%	910	11.8%	168	8.8%
Community Type								
Urban	3,215	31.3%	1,057	38.9%	910	37.4%	168	39.2%
Suburban	3,215	49.6%	1,057	44.6%	910	45.2%	168	47.7%
Religion								
Evangelical	3,114	31.8%	1,026	27.4%	910	26.9%	168	26.2%
Mainline	3,114	29.4%	1,026	30.8%	910	31.6%	168	34.4%
Catholic	3,114	23.0%	1,026	21.1%	910	21.4%	168	15.7%
Other	3,114	8.1%	1,026	9.1%	910	9.0%	168	9.7%
Student	3,205	14.0%	1,057	25.7%	910	26.5%	168	26.3%
Divorced	3,185	10.9%	1,056	17.8%	910	17.4%	168	22.7%
Knows Online Dater	3,195	30.9%	1,054	45.8%	910	46.0%	168	75.6%
Religious Attendance	3,168	2.7	1,045	2.5	910	2.5	168	2.3
Mistrust of Online Dating	2,023	72.7%	977	67.3%	910	67.5%	168	43.4%
Visited Dating Website	2,252	10.5%	1,057	18.1%	910	18.9%	_	_
Variable of Interest								
High Religious Saliency	3,172	46.1%	1,049	37.0%	910	37.4%	168	26.5%

Source: Pew Internet & American Life Project: Online Dating, 2005, weighted

Dependent Variable: Visited a Dating Website

The dependent variable is a dichotomous measure of whether the respondent has visited a dating website at any point in his/her life. An answer of *yes* was coded as "1." This measure has been used in other studies of online dating as well (see Madden and Lenhart 2006; Sautter et al. 2010). Respondents also were asked which dating website they visited. The most popular site listed was Match.com (28.6% of online daters). Some respondents also listed religious dating websites, like ChristianMingle and JDate, although the sample size was small.

Variable of Interest: High Religious Saliency

The variable of interest measures whether the respondent considers himself/herself religious. When asked whether being a "religious person" describes them well, respondents answering *very well* to this question are considered to have high religious saliency and those who answer *somewhat*, *not too well*, or *not at all* are considered to have low religious saliency (see Edgell et al. 2006:219; Madden and Lenhart 2006). The measure was recoded as a dichotomous variable, with the answer *very well* coded as "1." The original ordinal variable produced the same substantive results as the following analysis, and therefore recoding the salience measure does not bias the results. There were two main reasons to dichotomize the variable of interest. First, it provides a substantively stronger focus on the highly religious, a social group with unique perceptions and behaviors according to past literature (Dollahite, Hawkins, and Parr 2012; Goodman and Dollahite 2006; Lambert and Dollahite 2008). And second, the measure is easier to interpret and is consistent with past descriptive reports on the same data (see Madden and Lenhart 2006).

Sociodemographic Control Variables

The analyses include the following types of sociodemographic variables in order to control for spuriousness: gender (1= Female), race (White, Black, and Other), age, education, income, community type (Rural, Urban, and Suburban), religious affiliation (Evangelical Protestant, Mainline Protestant, Catholic, Other, and None), student status (part-time or full time), and divorced status. Income is dummy-coded into "less than \$30,000" (<\$30,000), "more than \$75,000" (\$75,000+), and "missing income" (Missing), with the reference group being "\$30,000 to \$75,000" (\$30K-75K). Since there was a high amount of missingness on income, a dummy-coded variable for missing values on income was created in order to prevent the loss of many cases from the analyses. The analyses also control for whether the respondent knows an online dater (1 = yes), which has been shown to be one of the strongest predictors of online dating (Sautter et al. 2010). The measure was tested for mediation, but since it was not significant, it simply is added as an additional control variable.

Mediating Variables: Mistrust of Online Dating and Religious Attendance

An important component to the following study is the testing of mediating effects, also known as intervening or indirect effects. Mediating variables are defined as "generative mechanisms" through which an independent variable is able to affect the dependent variable (Baron and Kenny 1986: 1173). In this way, they are important to statistical analyses because they help to explain why and how a relationship exists, instead of just where a relationship exists (moderator variables), or how strong the relationship is (e.g. robust dependence approach; see Goldthorpe 2001). Often, there are many mechanisms at play that connect the effect of the independent variable to the dependent variable, so mediation techniques help to highlight some of the processes based on the available measures but not all. In the context of the study, the research goal is to discover potential mechanisms influencing the effect of religious salience on attempting online dating.

Two measures are tested for mediation in the following analyses: whether the respondent views online dating websites as dangerous (*Mistrust of Online Dating*) and how often one goes to religious services (*Religious Attendance*). *Mistrust of Online Dating* is a dichotomous measure, coded "1" if the respondent agrees that online dating is "dangerous." *Religious Attendance* is an ascending ordinal measure with the following response categories: 1) *Don't go to worship services*; 2) *Several times a year*; 3) *About once a month*; 4) *About once a week*; and 5) *Daily*.

Analytical Method

The study employs sequential binary logistic regressions to test the effect of religious salience on the odds of visiting a dating website. The first model includes just the sociodemographic control variables. The second model adds the religious salience measure and examines this variable of interest when controlling for sociodemographic characteristics. In order to examine the strength of the variable of interest, a measure for knowing an online dater is added to the third model. Lastly, the two mediator variables are added to the fourth and final model, and the innovative KHB method estimates their mediating effects. This mediation technique is necessary to calculate mediating effects because testing mediation in logistic regression is inherently difficult due to the "rescaling problem" (see Winship and Mare 1984). Moreover, the KHB method also allows for testing multiple mediators, partitioning of mediating effects, and significance tests, which play key roles in understanding the level of mediation in the following analyses. For more methodological details, see Karlson, Holm, and Breen (2012) and Kohler, Karlson, and Holm (2011). All analyses are performed in Stata/SE 12.1.

FINDINGS

To begin, the first three models of multivariate logistic regressions show the predictors of visiting a dating website prior to the inclusion of the mediator variables (see Table 2). Model 1 only shows the sociodemographic predictors of online dating prior to adding the variable of interest. Age is negatively associated with online dating, while divorced status is positively related to online dating. Other than the *Age* and the *Divorced*

³ There were other attitudinal measures on online dating asked in the survey besides *Mistrust of Online Dating*, but they were not significant mediators, so they are excluded from the analyses.

indicators, there are little significant differences among control variables,⁴ a finding consistent with past research on online dating (see Sautter et al. 2010).

In Model 2, the addition of the religious salience measure to the regression allows us to test Hypothesis 1: Those with high religious saliency in the target population are less likely to visit a dating website. Results indicate that even when controlling for conventional sociodemographic variables, those with high religious saliency are significantly less likely to visit an online dating website compared to those with low religious saliency. Specifically, they have half the odds of visiting an online dating website compared to those who place little emphasis on their religion (OR = .49; p < .01). Moreover, it is the strongest predictor of online dating in the model, even stronger than age and divorced status (β = -.18). Based on the predicted probabilities calculated from Model 2,⁵ those with high religious saliency have a 13% predicted probability of online dating compared to 23 percent for those with low religious saliency. Evangelicals with high religious saliency have a 16 percent predicted probability of online dating compared with 28 percent of those with low religious saliency. This discrepancy also exists between Mainline Protestants (14 percent vs. 24 percent) and Catholics (9 percent vs. 16 percent). Clearly, religious salience has a strong effect across religious groups in determining whether one chooses to visit an online dating website in the early 2000s.

But is this relationship affected by whether the respondent knows an online dater? Studies show that exposure to online dating through one's social network strongly increases the odds of the respondent attempting online dating (Sautter et al. 2010). Because knowing an online dater increases knowledge about online dating in general, it can reduce the stigma of online dating and increase its social approval (Orr 2004). Model 3 introduces this measure in order to test the resilience of the religious salience measure against one of the strongest predictors of online dating. Analyses show little change in the coefficients for the variable of interest (OR = .50; $\beta = .16$), and the substantive results remain the same (p < .01). Even when controlling for whether the respondent knows an online dater, the effect of religious salience on online dating holds strong. This suggests that the resistance toward online dating among the very religious does not appear to be tied to exposure and familiarity, and other explanations are needed. Moreover, this suggests that the "social contagion" hypothesis (i.e., online dating will spread through social networks, see Sautter and colleagues 2010) does not appear applicable to the very religious.

⁴ If the reference groups are rotated for every indicator, there is only one instance where there is significance (e.g. Catholics compared to Evangelicals are significantly less likely to visit a dating website), but it is only marginally significant (p<.05).

⁵ All other variables are held at the mean.

Table 2. Models 1-3: Logistic Regression Odds Ratios & Betas of Independent Variables on Online Dating

	Model 1	Model 2	Model 3
	$OR(\beta)$	$OR(\beta)$	$OR(\beta)$
Control Variables:			
Female	.88 (03)	.88 (04)	.77 (06)
Race			
Black	.99 (00)	1.14 (.02)	1.57 (.08)
Other	.86 (03)	.84 (03)	.96 (01)
Age	.98 (14)*	.99 (12)	.99 (08)
Education			
Less than HS	1.24 (.03)	1.24 (.03)	1.16 (.02)
Some College	1.05 (.01)	1.07 (.02)	.90 (02)
BA/BS+	1.22 (.05)	1.24 (.05)	.94 (-
.01)			
Income			
<\$30,000	.70 (09)	.71 (09)	.81 (05)
\$75,000+	1.07 (.02)	1.06 (.01)	.95 (01)
Missing	.64 (08)	.72 (06)	.81 (03)
Community Type			
Urban	1.57 (.12)	1.48 (.10)	1.35 (.07)
Suburban	1.55 (.12)	1.49 (.10)	1.48 (.10)
Student	.92 (02)	.96 (01)	1.03 (.01)
Divorced	1.88 (.13)**	1.91 (.13)**	1.71 (.01)*
Religion			
Evangelical	1.17 (.04)	1.68 (.12)	1.74 (.12)
Mainline	1.14 (.03)	1.32 (.07)	1.27 (.05)
Catholic	.62 (11)	.74 (06)	.81 (04)
Other	.99 (00)	1.19 (.03)	1.05 (.01)
Knows Online Dater			4.94 (.39)***
Variable of Interest			
Variable of Interest:			
High Religious Saliency		.49 (18)**	.50 (16)**
AIC	2.42	2.39	2.20
df	18	19	20

Source: Pew Internet & American Life Project Survey: Online Dating, 2005

Note: N = 910. Target population: Internet users who were single at some point between 2000 and 2005 *Reference Groups*: white, high school education, \$30k-\$75k income, rural, Religion-None OR = odds ratio; $\beta = \text{fully standardized coefficients}$

^{*}p < .05. **p < .01. ***p < .001.

Testing the Mediating Variables

Finally, Hypotheses 2 and 3 are tested using the KHB method in the fourth and final regression model. Table 3 shows the coefficients for the mediators and their subsequent mediating effects estimated through the KHB method. What is noteworthy is how weak the religious attendance predictor is within the model ($\beta = -.01$). Moreover, the insignificance of the measure does not appear to be related to its standard error, which is one of the lowest in the model (SE = .095). In contrast, the mistrust of online dating significantly predicts online dating (p < .001). Those who view online dating as "dangerous" are significantly less likely to ever visit an online dating website. The total mediating effect of both mediators accounts for 23 percent of the total effect of religious salience on online dating. However, religious attendance only accounts for 3 percent of the total effect and is not a significant mediator. In contrast, mistrust of online dating accounts for one-fifth of the total effect of religious salience on the dependent variable and is a significant mediator (p < .01). Substantively, mistrust of online dating partially mediates the effect of religious salience on visiting a dating website, while religious attendance does not.

Table 3. Model 4: Logistic Regression Odds Ratios & Betas of Independent Variables on Online Dating & KHB Test of Multiple Mediating Effects

Depend	ent Variable: Vi				
		Model	4		
		OR	(β)		
Control	Variables:				
Female		.80	(05)		
Race			, , ,		
	Black	1.88	(.10)		
	Other	1.10	(.01)		
Age		.99	(04)		
Education	on				
	Less than HS	1.21	(.03)		
	Some College	.89	(03)		
	BA/BS+	.80	(05)		
Income					
	<\$30,000	.92	(02)		
	\$75,000+	.91	(02)		
	Missing	.85	(02)		
Commu	nity Type				
	Urban	1.24	(.05)		
	Suburban	1.49	(.09)		
Student		1.06	(.01)		
Divorce		1.73	(.10)*		
Religion					
	Evangelical	1.93	(.14)		
	Mainline	1.31	(.06)		
	Catholic	.91	(02)		
	Other	1.18	(.02)		
Knows (Online Dater	4.76	(.37)***		
Variable	of Interest:				
High Ro	eligious Saliency	.58	(12)*		
				KHB Method:	
Mediatir	ng Variables:			Contribution of Mediator	Overall Mediating %
Religion	s Attendance	.98	(01)	14%	3%
	Online Dating	.32	(25)***	86%	20%**
AIC		2.11			
df		22			
J					

Total Mediating Effect 23%

Source: Pew Internet & American Life Project Survey: Online Dating, 2005

Note: N = 910. Target population: Internet users who were single at some point between 2000 and 2005

Reference Groups: white, high school education, \$30k-\$75k income, rural, Religion-None

OR = odds ratio; $\beta = \text{fully standardized coefficients}$

^{*}p < .05. **p < .01. ***p < .001.

DISCUSSION & CONCLUSION

Results support the hypothesis that those with high religious saliency avoided online dating during its boom in the early 2000s. This is consistent with the history of the very religious being more resistant to secular changes in dating, marriage, and the family. With regard to the particular reasons behind avoiding online dating, the very religious have a higher level of mistrust toward online dating as a medium. The perception that online dating is "dangerous" explains one-fifth of the total effect of religious salience on visiting a dating website. Consequently, the vast majority (73 percent) of early online dating adopters were not religious (see Table 1). This suggests that the failure of the very religious to accept online dating during its crucial development in the 2000s may have been a missed opportunity for greater normative acceptance and increased usage in recent times. Although there is always opportunity for adopting new technology in the future, the early adoption of new technology can be vital for the rate of social change and reducing stigma (Orr 2004; Sautter et al. 2010). With the rate of online dating usage slowing and online dating stigma reduced but still prevalent (see Couch, Liamputtong, and Pitts 2012; Slater 2013; Smith and Duggan 2013), the early adoption of online dating among the very religious would have perhaps helped expedite its function as a normative medium to union formation instead of a practice that most single Internet users still do not use when looking for a romantic partner (see Smith and Anderson 2015; Smith and Duggan 2013).

Refraining from online dating in the early 2000s had less to do with religious attendance and instead related to higher levels of mistrust toward online dating. Though it may come as a surprise that religious attendance did not mediate nor predict the odds of online dating, it reveals more nuance regarding mate selection processes among the religious singles. Though we see high rates of traditionalism among the very religious (Xu et al., 2005), few romantic couples today (~5 percent) meet through religious institutions (see Rosenfeld and Thomas 2012). There are numerous potential explanations for this. First, religious attendance for single young adults is not as consistent as that of married older adults (Stolzenberg et al. 1995; Wuthnow 2007), even among those who identify as very religious (see Uecker, Regnerus, and Vaaler 2007). High mobility, work conflict, greater individualized religious beliefs, and life course effects may explain the inconsistency (see Lipka 2013). This would limit any opportunity to meet other singles in the congregation, though many still desire same faith partners (Irby 2013). Second, it is uncertain how many congregations really offer "marriage-oriented events" for singles in their congregation (see Burdette 2012). Though ministries and events catered toward single adherents have been growing since the mid-20th-century, most congregations still focus on the needs of married partners with children (see Edgell 2005). And third, the ability to meet alternative partners in one's local congregation may be limited to the size of the congregation and its pool of single adults. In sum, the highly religious, their congregations, and structural opportunity for partners may hinder the function of religious attendance to increase access to alternative dating opportunities. The irony is that online dating might alleviate the aforementioned obstacles and increase access to same faith partners. However, the mistrust of online dating, which partially led to its avoidance in the early 2000s, suggests that the very religious may value trust and assurance rather than easy availability through new technology.

Though this study focuses on the early adoption of online dating (2000-2005), less is known about the current usage of online dating among the very religious given how more recent surveys did not ask respondents about their religious salience (see Smith and Duggan 2013). Future research should return to the relationship between religious salience and online dating to see if anything has changed, which is certainly possible. If history is any indication, though, we would expect lower levels of online dating among the religious to persist given the higher tendencies toward traditional pre-marital/marital practices among the very religious (Edgell 2005; Xu et al., 2005). Just as the very religious continue to show lower rates of divorce, cohabitation, and interfaith

marriage, as well as earlier ages at first marriage, one would expect lower rates of online dating usage to continue.

However, research has shown that religion is highly adaptable to secular social changes. Over time, religious individuals/institutions learn to negotiate boundaries with secular culture and develop conditions under which accommodations are appropriate (Edgell 2005). Given how online dating in the early 2000s was avoided based on a higher level of mistrust, its possible that the very religious may modestly increase their use of online dating if it can align with the common boundaries the very religious place on dating (e.g., serious commitment, community involvement, and shared religious faith; see Irby 2013). Although the connotations of online dating with the "hook up" culture remain intact due to mobile apps like Tinder and Grindr being used for sex, it is possible that new forms of online dating can gain trust if they emphasize shared religious faith, reaffirm the importance of marriage, and involve the community (see Irby 2013). Christian Mingle and ChristianSingles have emphasized shared Christian faith and marriage as an end goal, but adoption has still been slow relative to the broader online dating market, with only two percent of online daters using Christian Mingle in 2013 (see Smith and Duggan 2013). One potential reason is that the community is still not involved in the matching process and it is still uncertain whether the other online dater is trustworthy. Some religious groups have created congregation-based dating websites, whereby online dating accounts cannot be activated until congregational membership has been verified and approved by the congregation's leader. This is one strategy to pull in the religious community, provide safety, and be assured that the other online dater is serious about their religious faith. Another strategy is to link online dating profiles with social media accounts, like Facebook. This would allow online daters to check if they have mutual "Facebook friends" and use these mutual friends as "gatekeepers," who verify the character and intentions of the potential suitor. In any case, if the very religious are to accept online dating, greater accountability mechanisms need to be in place in order to garner trust in this alternative dating practice.

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⁶ The International Churches of Christ use this strategy with their dating website: www.dtheartandsoul.com.

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