

Social Affiliation from Religious Disaffiliation: Evidence of Selective Mixing among Youth with No Religious Preference During the Transition to College

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Introduction

The number of individuals claiming a non-religious identity in the United States is on the rise (Smith 2015). Almost one-fourth of the overall U.S. public and almost one third of those under the age of 30 (so-called “Millennials”) fail to identify with any of the major religious traditions (Hout and Fischer 2014; Smith 2015). Research suggests that disaffiliation trend is driven by both generational replacement and cultural distancing processes. Hout and Fischer (2002) propose that a good portion of the unaffiliated consists of persons who have developed a negative view of organized religion in the wake of the rise of an increasingly vocal “religious right” into the political arena during the 1990s. Increasing disaffiliation can thus be read as a way for these individuals to distance themselves from what are perceived to be intolerant social and moral views espoused by public religious figures. The demographic and attitudinal profile of persons who belong the unaffiliated category is consistent with this hypothesis. For instance, the unaffiliated are more likely to believe that religious organizations are too concerned with money and power and excessively involved in politics (Funk and Smith 2012), and are more likely to self-classify as either “liberal” (36%) rather than “conservative” (7%) (Hout and Fischer 2014). A majority of the 46 million persons who claim no affiliation however, continue to hold religious or spiritual beliefs, such as belief in God or a higher power (Hout and Fischer 2014: 428-432; Smith 2015).

In addition, 31% of the unaffiliated now identify as atheist or agnostic; doubling in the last 7 years, these individuals comprise about 7% of the U.S. population (Smith 2015:30). This is

significant, given that Atheism continues to be one of the most negatively regarded social identities in the United States today, more so even than other highly stigmatized individuals such as Muslims and LGBT individuals (Edgell, Gerteis, and Hartmann 2006). The non-religious often are stereotyped as “judgmental,” “hard-headed,” “hard-hearted,” “cynical,” “critical,” “opinionated,” “radical,” and so on (Harper 2006:546).

Given this symbolic significance, it should come as no surprise that cross-sectional research shows that religion is often a central organizing characteristic of social networks, having an effect comparable to that of class and race (DiPrete et al. 2011). The goal of this paper is to ascertain how these symbolic and social patterns surrounding religious “Nones” influence the dynamic formation of social networks, in a social context in which religious identification (and religiosity) is a salient cultural marker. In spite of its substantive importance, we know very little about the local network structure of individuals who express no religious preference in the U.S. today, with existing studies examining relationship patterns between religious “Nones” and religious individuals producing mixed findings. For example, one study indicated that “just over half of individuals lack any interreligious tie” (Scheitle and Smith 2011:412), while another found that “68 percent of all respondents who belong to a religious tradition report having friends who are not religious at all” (Vargas and Loveland 2011:721). Research on the emotional support available to persons with no religious preference suggests that they have very restricted sources of such support, typically from only a few strong relationships (e.g., spouses and romantic partners) (Edgell, Mather, and Tranby 2013). In fact, many self-described atheists turn to the internet to find community and cultivate their identities (Smith 2013).

In this paper, we take advantage of a unique data source on the personal networks of youth transitioning into college in a context (a prominent Catholic University) where religion is a culturally salient facet of everyday life and forms a key resource for interaction and the formation of personal relationships. Our aim is to ascertain to what extent religious affiliation plays a role in shaping the local network structure of College Freshmen in this context. We focus on homophily, or the tendency for dyadic relationships to be more likely to form and persist among individuals who share certain traits, attitudes, beliefs, or socio-demographic markers (Lazarsfeld and Merton 1954; McPherson, Smith-Lovin and Cook 2001; Rivera, Soderstrom, and Uzzi 2010; Mehra et al 1998). In particular we focus on homophily based on religious affiliation, which has been the subject of recent work (Cheadle and Schwadel 2012).

While the homophily phenomenon is one of the most well-established empirical generalizations in all of social science (McPherson et al 2001), recent research indicates that the saliency of certain markers in generating the homophily effect depends on context (Mehra, Kilduff and Brass 1998; Mollica, Gray and Trevino 2003). More specifically, a marker may become a more significant basis for relationship formation when it is (a) culturally significant, and (b) a given sub-category of that marker is relatively “rare,” making it a salient source for self-identification. As Rivera et al (2010: 94) note, although any attribute could serve as the basis for homophily it is usually “rare attributes” that have “the strongest influence on attachment.” For instance, in a context in which racial markers are a culturally salient basis for relationship formation and maintenance (as is typical in the United States), members of relatively under-represented (minority) racial categories tend to exhibit a stronger likelihood of connecting to one another than members of the majority group. The basic idea is simple: “people in a social

context tend to identify with others with whom they share characteristics that are relatively rare in that context” (Mehra et al 1998: 442). In support of this hypothesis, Mehra et al (1998) found that in a context in which both gender and race are culturally salient categories (a Business School MBA Program) and in which both women and non-whites are relative minorities, homophily on race and gender was stronger for the members of minority groups in comparison to members of the majority group (adjusting for the baseline availability of similar others). This finding was replicated by Mollica, Gray, and Trevino (2003: 129) in a similar setting.

Here we extend Mehra et al’s (1998) “minority distinctiveness” framework to the case of affiliative minorities in a context in which religion is a culturally significant category. Accordingly we propose that, in a context in which the culture is defined in relation to a dominant religious tradition (in our case Catholicism), religious disaffiliation, along with affiliation with a minority religious culture--as contextually “rare” but symbolically significant categories--will become an important basis for homophily. Thus, we expect to find stronger tendencies toward homophily among groups who do not belong to the dominant religious culture (in our empirical setting, this includes both Nones and non-Catholics).

In addition, we attempt to shed light on the mechanisms that might be behind the minority distinctiveness effect. In the social networks literature, the first potential mechanism has been called cultural matching (Edelmann and Vaisey 2014; see also Lizardo 2006; Vaisey and Lizardo 2010; Rivera 2012). When cultural matching drives interactions, people preferentially connect to others who are similar on an important or valued marker. The second mechanism driving patterns of interaction consists in an aversion to form connections to dissimilar others, which may be termed cultural distancing. Scholarship has recently begun to stress the importance

of distaste or aversion to certain traits in relational dynamics (see Edelman and Vaisey 2014). Thus instead of resulting from a “pull” toward similar others, homophily might stem from people steering clear of certain others. For instance, Schaefer, Kornienko, and Fox (2011) have shown that homophily among depressed individuals is rooted in the non-depressed avoiding the them. Given the negative characterization of Nones by the religiously affiliated (Harper 2006) and negative affect sometimes harbored by Nones for religious individuals (Zuckerman 2012), this distancing mechanism may be operative in structuring patterns of association across the affiliated/unaffiliated boundary.

In our analytic framework, we can infer that a cultural matching process is work if we observe a disproportionate tendency for the creation of ingroup ties (homophily) among Nones and non-Catholics. We can infer that a cultural distancing process is at work if we observe a lower than expected likelihood of cross-group ties for either Nones or non-Catholics in relation to the Catholic majority. Our expectation that given the fact that religious disaffiliation is the more discordant (and thus salient) identification in this context, we should observe stronger tendencies matching and distancing at work among persons who do not identify with any religious tradition in comparison to affiliated non-Catholics.

Data and Methods

The data used in this paper come from an ongoing study at the University of Notre Dame called NetSense (Striegel et al. 2013). Researchers equipped a cohort of roughly 200 incoming first year students with smartphones which track, among other things, the calls and texts made and received. Additionally, beginning before their matriculation and continuing every four

months after that point, participants were surveyed about a series of beliefs, attitudes, and cultural tastes. In order to examine how religious identification affects social network formation, survey data from before matriculation is used to predict connections made during the first semester. This time ordering helps uncover the effects of religious identification on the network formation process, in the context of newly forming personal relationships upon their arrival to campus.

The network under consideration consists of all observed ties ($E = 647$) formed by 186 study participants during their first semester in college. Because we are interested in tie formation, we included only students within the study. This allows us to examine only new ties and ensures we have survey information on each person. The network is constructed from students' calls and texts; a tie is said to exist if one student contacts another and the other student responds, which results in a non-directed network¹. This is important since studies of homophily survey participants at a cross-section in regards to relationships that may be a mix of new and consolidated ties. Our empirical strategy, like that of Mollica et al (2003), allows us to capture homophily in the context of newly forming relationships.

We use an exponential-family random graph modeling (ERGM) framework to analyze the data. This analytical approach attempts to maximize the probability of the entire observed network using statistics that capture global properties of a network, but it can also be interpreted as predicting the probability of two individuals being connected given a set of attributes

¹ Since this might be considered a low threshold from which to infer relationships, we replicated the following analyses on networks where a tie was said to exist if person i contacted person j more than 5 times and more than 10 times. The direction, magnitude, and statistical significance of the coefficients for Nones remained stable across all models. Additionally, these behavioral measures of contact and subjective relationship nominations from the survey data strongly predict each other.

(Goodreau et al. 2008:7–8). In fact, the ERGM framework has the major benefit of using both network and attribute data to estimate the probability of ties between certain individuals.

We consider three basic network statistics in the following analysis. The first is a term that accounts for the number of ties within the network, giving the probability that two randomly chosen individuals within the network will be connected. The second indexes homophily on a given trait by counting the number of ties for which both connected individuals share the same attribute value (e.g., both individuals identify as non-religious). The third indexes the number of friends that individuals with certain trait have (e.g., the number of friends that nones tend to have).

Given that ERGMs predict the probability of ties between two individuals, all of the substantive variables--including religious identification--are considered predictors. The religion variable is divided into three categories: Catholic (69.54%), "Other" non-Catholic (13.19%), and no preference ("None") (17.24%). The other category consists of individuals identifying with various Protestant denominations, Hindus, Muslims, and Jews. The "None" category is composed of individuals who identify as atheist, agnostic, unsure, and who refuse to identify with any religious label. These categorical divisions are less than ideal but are roughly representative of the main axis of differentiation in this empirical context (a majority Catholic private school). We also estimate models that adjust for matching on gender, race, parental education (e.g. whether none, one or both parents received a college degree), and political orientation (liberal, moderate, or conservative) given that previous work suggests these factors are correlated with religious identification and social networks (Scheitle and Smith 2011; Vargas and Loveland 2011).

Results

TABLE ONE ABOUT HERE

Table 1 presents the results from five different models. The first model contains only the statistic accounting for the number of ties in the network. Model 1 predicts the probability of a connection between two randomly chosen people based solely on the number of people and ties in the network (Goodreau et al. 2008). The table reports parameter estimates in terms of effects on the log odds of a tie because they make it easy to see the directionality of influence that later attributes have upon the likelihood of connections. Model 2 adjusts for matching on socio-demographic characteristics other than religious affiliation along with the edges statistic to provide a basic model against which we may compare further models with the religious affiliation terms.

The third model provides evidence for homophily based on religious (dis)affiliation, by including terms that index the extent to which individuals in each of the three religion categories (Catholic, Other-Affiliated, and Nones) are more likely to form ties with members of the same category. Positive and statistically significant coefficients for these three terms indicate the presence of homophily. We find support for the hypothesis that members of the minority religious culture will be more likely to form within-group ties in this context. In contrast to Catholic students, we find that both Nones and Other-Affiliated students exhibit a strong tendency to form ties with members of the same religious category. As shown in Model 4 this result remains even after we adjust for matching on other sociodemographic markers. This suggests that religious affiliation is an independent driver of network structure net of matching on other factors (Cheadle and Schwadel 2012). Naturally, in model 4 we do observe a drop in the

religious homophily estimate, indicating that some of the raw religious homophily is actually the result of matching on other characteristics (e.g. Race, Class, Political Orientation, etc.). Note however, that the drop in the magnitude the religious homophily effect is almost three times as large for the Other-Affiliated (40%) than it is for the None (14%) category. This suggests that matching on Other-Affiliation is more likely to be driven by matching on other (non-religious) socio-demographic markers than is matching on disaffiliation.

Model 5 adjusts for both homophily and degree terms for each religious group. With both sets of statistics in the model, the substantive interpretation of the degree-effect changes, permitting us to disambiguate between matching and distancing mechanisms. The degree statistic for each affiliation group now should be interpreted as giving the log-odds that an individual from that group will have a tie with an individual from a different religious affiliation group (heterophily). The homophily statistic still represents the extent to which individuals within each religious affiliation category preferentially connects with same-category others.

The results are consistent with the hypothesis that both matching and distancing processes are operative for members of the minority religious culture. After adjusting for the tendency to connect to persons with a different religious affiliation, the homophily effect almost doubles for the unaffiliated. Most importantly, the Nones' degree term is statistically significant and negative, indicating that in this context, unaffiliated individuals are less likely to connect to persons who claim a religious affiliation, whether Catholic or non-Catholic. This result is consistent with the operation of a cultural distancing mechanism along the affiliated/unaffiliated boundary. We find a similar pattern of results the Other-Affiliated students, suggesting that a similar dynamic is operative for persons in this category. Note, however, that the degree statistic

for Other-Affiliated, while negative, does not reach conventional levels of statistical significance. This suggests that distancing processes along the Catholic/non-Catholic boundary is not as strong as they are along affiliation/disaffiliation divide.

Model 6 adds homophily terms for matching on other socio-demographic markers to the Model 5 specification. Adjusting for these factors does little to change the strong homophily effect among members of religious minority categories. For both Nones and the Other-Affiliated the homophily effect remains about the same as that estimated in Model 5, exhibiting only a slight decline. Adjusting for matching along other socio-demographic factors actually makes the cultural distancing effect for both Nones and Other-Affiliated stronger; for this last group the degree statistic is now statistically significant. Taken together, these results indicate that both unaffiliated and non-Catholic affiliated students are both more likely to have ties with same-category members and less likely to have ties with members of other categories. “Other” category members are of course different for each of the two religious minority groups; for Nones, this means all affiliated students (regardless of Catholic/non-Catholic status) while for the Other-Affiliated this means either Catholic or unaffiliated students.

Since the models presented so far do not assume that the probability of a tie being present will be affected by other ties in the network (i.e., dependencies), the goodness of fit for the models can be assessed by standard measures (Harris 2014:61–71). Both the Akaike Information Criterion (AIC) and log-likelihoods are provided for each model. The AIC values for Models 1 and 2 suggest that including matching on sociodemographic variables other than religious affiliation dramatically increases model fit. Including terms for matching on religious affiliation only in addition to the edges term (Model 3) increases model fit over Model 1, but Model 2 is

still the most preferable. Adding terms for matching on all socio-demographic covariates in Model 4 leads to a more marked improvement in fit over Models 1 and 3 and a slightly better fit than Model 2. Model 5 is the best among the models that do not account for matching on other sociodemographic characteristics but is worse than Models 2 and 4. The final Model, accounting for matching on all socio-demographic characteristics as well as outgroup tie formation for each religious category, provides the best fit.

We also checked the goodness-of-fit for these models graphically, which is especially useful since the improvement in fit of Model 6 over Model 4 is small. The idea underlying graphical goodness-of-fit checks for ERGMs is using the results from each model to specify a simulation that generates artificial networks and then comparing these generated networks against the observed network on a set of criteria not explicitly modeled (Goodreau, Kitts, and Morris 2009). Following Goodreau, Kitts, and Morris (2009), we compared minimum geodesic distance, edgewise shared partners, and degree distributions between the simulated and observed networks. The first corresponds roughly to the average shortest number of people that connect two randomly chosen students (if they are connected, this value would equal one). The edgewise shared partner distribution captures the number of friends each connected pair of students have in common, and the final is the distribution of how many connections students have. The results (available on request) are consistent with those obtained using the AIC and log-likelihood criteria above. However, the graphical tests indicate a marked improvement of Model 6 over the others.

Discussion and Conclusion

In this study, we sought to ascertain whether we would observe homophily based on religious disaffiliation in the context of newly forming relationships during the transition to college. We argued that the growing prevalence of the unaffiliated (“None”) category in the general population may result in this status becoming an important driver of the formation (or non-formation) of social relationships. We further argued, that this effect might be exacerbated in a context in which religious identification is salient. We identified two possible ways in which religious (dis)identification may play a role in social networks. The first--a cultural matching process--suggests that people choose to interact because they share common attributes, and it leads to the hypothesis that individuals form a disproportionately large number of connections with similar others. The second mechanism--cultural distancing--suggests that people avoid interaction with dissimilar others and leads to the hypothesis that people form a disproportionately low number of ties with dissimilar others. Our results suggest that both of these mechanisms may be structuring interaction across the affiliated/disaffiliated divide. We found that Nones are disproportionately more likely to connect to other Nones and much less likely than chance to connect to affiliated students. We find a similar empirical pattern (i.e., frequent intra-group interactions and infrequent inter-group interactions) among religiously affiliated non-Catholics although with a smaller tendency towards same-group homophily.

The results from this study are consistent with the proposition that in specifiable empirical contexts, religious disaffiliation can become a powerful basis for relationship formation. These results are in line with recent research suggesting that homophily effects are dependent on the local relational and cultural context. In particular we find that in a setting where religious identification is a culturally significant basis of relationship formation,

disaffiliation--as a relatively rare but symbolically potent subcategory--generates a strong form of homophily, in which tendencies toward ingroup preference and outgroup avoidance are revealed even after a relatively short-time span.

Our study has several advantages over previous studies of homophily based on religious affiliation (e.g. Cheadle and Schwadel 2012). First, rather than relying on network surveys that truncate the maximum total number of contacts and selecting on the strongest connections in the personal network while taxing the respondent's mnemonic and attentive capabilities (e.g., DiPrete et al 2011), we collect data on the personal network completely unobtrusively thus increasing the likelihood of capturing both strong and weak personal relationships. This also allows us to sidestep the problematic issue of cross-respondent heterogeneity in the interpretation of the meaning of relationship identifiers such as "friend" or "confidant" (Marin and Hampton 2007).

Second, rather than studying already consolidated relationships our research design and empirical setting allow us to examine the process of assortative sorting into homophilous groups at a time when individuals are forming relationships in a new setting at a point in the life course likely to generate long-standing relationships (transitioning from high school to college). The patterns of homophily and heterophily that we observe are thus emergent from the interactional context rather than being a carry-over from previously existing relational settings. Our empirical strategy therefore allows us to make a safer inference that in our case, both the disaffiliated and members of religious minorities are both forming and maintaining homophilous relationships via a cultural matching mechanism rather than via proximity or other high-level structural processes. In other words, the homophily patterns based on affiliation status are likely produced by

processes of “choice homophily” rather than “structural homophily” (McPherson et al 2001). Structural contexts however, may be implicated in the distancing processes that we observe, as persons with no religious affiliation may self-select out settings in which relationships are formed and maintained such as Mass and other religious services.

Our findings complement previous work on the role of religion in shaping social networks and cementing salient social divisions in the United States (Diprete et al. 2011; Cheadle and Schwadel 2012). Our results suggests that rather than being a generalized phenomenon, whether religious preference comes to have an effect on the interactional life of persons depends on the saliency of religion as a relevant source of social identification in a given context. While our findings are circumscribed to one such context, they do open up important questions for future research. This includes the extent to which our results may be generalizable to settings where religion is salient in different ways, or whether they can be generalized to other contexts in which religion is not a primary source of social identification.

For example, in more secularized European nations such as France or Denmark (Norris and Inglehart 2004), it seems very plausible that religious affiliation might not be a salient characteristic driving patterns of interaction among the secular (as it is with Catholic students in our study). Instead, there we should expect that it is precisely the religiously observant who should be subject to minority distinctiveness effects exacerbating the effect of matching (generating high levels of intra-religious homophily) and distancing (separating them from the secular majority) processes. This may be behind, for instance, the difficulty encountered by immigrant groups with high levels of religious identification (such as North African Muslims in secular Europe) in achieving high levels of assimilation and social integration in these type of

cultural settings. In this way, the two generative mechanisms evaluated in this paper rely on local context to determine their substantive operation.

Of course, the United States is distinctive among the wealthy societies in the Global North precisely because of its “unusual” level of religious identification and belief (Norris and Inglehart 2013). In this cultural context, both the “unaffiliated” but especially the unaffiliated non-believers (e.g. Atheists and Agnostics) count as “distinctive minorities” in our sense (Mehra et al 1998). This means that cultural matching and distancing processes in relation to the believing majority may be particularly salient among this portion of the “None” population. In this respect, the relatively pious American society makes religious identification salient in a way that may continue exacerbate the cultural and social divide between the affiliated and the unaffiliated non-believers. This may also have consequences for the future growth and “spread” of the non-belief in the United States.

However, it is important to realize that network formation mechanisms are always embedded in context and seldom operate at the global level of entire national societies. The results reported here (in Model 6) indicate that the matching and distancing mechanisms operate for both Nones and non-Catholic religious students within this explicitly religious context, and future research should investigate how the mechanisms might decouple in other contexts and with populations at a different stage in the life course. As shown for example in Model 5 by the Other-Affiliated category, it could be that in some contexts religious identification draws certain people together (cultural matching) without necessarily leading them to withdraw from dissimilar others via cultural distancing.

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