Revolution is the means by which people can revolt against a political structure that they dislike. For example, in the recent Egyptian revolution, people rebelled against a dictatorship. Given the recent revolutions in the Middle East and North Africa, determining possible causes of revolutionary behavior would allow psychological scientists and others to better predict human behavior in areas of unrest. The rebellion in Egypt was quickly followed by revolutions in surrounding nations. This contagiousness of revolution has been seen historically with the relatively quick succession of political revolutions from the mid-eighteenth century to the mid-nineteenth century and beyond (Kagan, Ozment, & Turner, 2004). However, much of the previous research on the causes of revolutions has been nonempirical (Fox, 2004; Montiel, 2006; Thompson, 1999). This lack of empirical data makes it difficult to discuss the causal factors that lead to revolution. Therefore, the goal of this study was to add empirical data to the existing historical and sociological data by using an experimental design to examine causes of revolution.

**Revolutions**

Revolution can take many forms. Revolution may be political, intellectual, social, or religious. Historically, revolutions tended to be examined individually. When compared, however, similarities are evident. In events such as the French and Russian Revolutions, economic difficulties, political turmoil, and social changes stand out. Also, it is interesting to note that these events tended to be isolated in single locations, such as one city or region. This isolation could be explained by the importance of social networking, which until recently was limited to small regions. Another interesting aspect is the common ideologies shared by the revolutionaries. In the French Revolution, the

**ABSTRACT.** Given the recent outbreak of revolutions, understanding the causes of revolutions would be beneficial for many people. In this experimental study, social networking, religious similarity, and moral reasoning were examined as possible causes of revolution. Participants were divided into four groups and were exposed to a conservative political model organization, which advocated using revolutionary behaviors to support political positions. Each model group differed in its religious background and use of social networking. All participants completed the Defining Issues Test 2 (DIT-2; Rest, Narvaez, Thoma, & Bebeau, 1999). Based on the results of the DIT-2, participants were placed into one of three schema groups: personal interests, maintaining norms, or postconventional. A three-way MANOVA confirmed a significant triple interaction effect in predicting willingness to protest utilizing the factors of 2 (social networking) x 2 (religious similarity) x 3 (moral reasoning), \( F(2, 152) = 3.342, p = .038, \eta^2 = .042, \) Observed Power = .625. This finding supports the complexity and multiplicity of the causes of revolution.

**Social Networking, Religious Similarity, and Moral Reasoning: Potential Causes of Revolution**

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revolutionaries shared a democratic ideology; in the Russian Revolution, they shared a communist ideology. This seems to point to the role of common ideology, political or religious, in revolutions (Mason, 2005).

Kimmel (1990) defined revolution as “attempts by subordinate groups to transform the social foundations of political power” (p.6). Both psychological and sociological scientists have sought to understand revolution and its causes. Hopper (1950) argued that revolution happens in four stages: initial mass excitement, collective unrest, goal formation, and organization. Several theories exist as to the causes of revolution. Gurr (1970) stated that it is relative deprivation and the justification and utility of violence that leads to revolution. Rustow (as cited in Thompson, 1999) argued that national unity is necessary. Skocpol and O’Donnell and Schmitter stated that weakness of the state structure is a precursor to revolution (as cited in Thompson, 1999). Furthermore, historical studies revealed that revolutions are often led by college students with reason to oppose the state, and that religious institutions also play an important role in many revolutions (Thompson, 1999). Fox (2004) found that religious contagion, grievances, mobilization, and repression all predicted willingness to protest and rebel. Most of these theories failed to account for how individuals become willing to protest against or revolt against a political structure. Kimmel (1990) differentiated between three sets of temporal causes of revolution: preconditions, precipitants, and triggers. Because precipitants and triggers deal with specific events and situations, the current study focused on preconditions of revolution. Specifically, the study focused on religion (supported by Fox, 2004; Thompson, 1999), social networking (supported by Fox, 2004; Thompson, 1999), and moral reasoning (supported by Gurr, 1970) as predictors of revolutionary behavior.

**Exploration of Possible Causes**

The importance of social networking and technology can be seen not only in recent events, but also in sociological studies (Eyck, 2001; Montiel, 2006; Opp & Gern, 1993). Social networking can include many activities, such as connecting with like-minded peers and advancing ideas. At present, social networking is most evident through social networking sites such as Facebook®. Social networking can facilitate revolution, but other factors, such as a religious similarity, contribute to the causes of revolution. In 2011, the first revolution occurred in a primarily Muslim nation, and further revolutions tended to spread to other Muslim nations. Fox (2004) and Thompson (1999) supported the idea that religious and political similarity, at least in certain circumstances, are related to the probability of revolution occurring. Also, based on Kohlberg’s theory, moral reasoning is related to political ideology (Fishkin, Keniston, & MacKinnon, 1973). Through the connection of political ideology, this suggests that moral reasoning may influence revolutions too.

The factors discussed above are by no means the only possible causes of revolutions. Fox (2004) cited ethnic differences, political repression, and other variables as contributors to political conflicts such as revolution. However, psychological and sociological research seems to point to social networking, religious similarity, and moral reasoning as potentially important factors in explaining the onset of revolutions (Fishkin et al., 1973; Fox, 2004; Shirky, 2008). Although no psychological theory comprehensively explains revolution, historical evidence underscores the importance of social, religious, and moral factors.

**Social Networking**

Social networking refers to connections among people. Few researchers have studied the effects of modern social networking websites such as Facebook®; however, researchers have studied the effects of personal networks of friends and group association on protest and rebellion. In a study on the East German Revolution of 1989, Opp and Gern (1993) demonstrated the importance of a personal network of friends with a willingness to protest. Eyck (2001) demonstrated that the mass information technologies, which were television and radio at the time, were the best predictors of the protests and riots in the 1970s. Harris (2008) demonstrated the importance of new forms of social networking for young people involved in politics and political matters. New social networking sites allow young people to have an audience for their ideas and access to groups they may not otherwise have (Boyd, 2007). Researchers have also demonstrated that networking facilitates mobilization of groups to carry out revolutionary behaviors (Eyck, 2001; Hillman, 2008).

Current events provide examples of how social networking technologies have been used in political protests. In Belarus in 2006, using the blog site, LiveJournal®, activists coordinated a peaceful
flash mob to protest a rigged election (Shirky, 2008). Although not political, British students used Facebook in 2007 to organize a protest against HSBC bank when an abrupt policy change greatly affected students with accounts through that bank (BBC, 2007). In Egypt in January 2011, political protesters used Facebook to organize political demonstrations, and supporters used Twitter* to post news of the events (BBC, 2011).

**Religious Similarity**

Historically, religion has been a major factor in revolution. Fox (2004) found that conflict that contains a religious component tended to spread more than conflict without a religious component. In this study, religious conflict was defined in terms of grievances, legitimacy, and discrimination. Interestingly, Fox (2004) found that the religious aspect only applied to violent conflict and not peaceful protest.

Researchers have addressed the political attitudes and involvement of both Christian evangelicals and fundamentalists (Harding, 2009; Lewis & de Bernardo, 2010). Although not all fundamentalists are evangelical, there is overlap, and fundamentalism is a measurable trait. In the United States in recent decades, a political movement known as the *Moral Majority* or *Religious Right*, which identifies with the Republican party, has emerged with many evangelicals entering into the realm of politics. Dating from the early 20th century, fundamentalists have been involved in a wide range of political issues including communism, civil rights, and education (Harding, 2009).

**Moral Reasoning**

Social justice and equality are often cited as justifications for political revolution (Mason, 2005). These justifications link revolution to morality, and specifically to Kohlberg’s model of moral reasoning, which asserts justice as the highest moral good (Kurtines, Alvarez, & Azmitia, 1990). The six stages of Kohlberg’s model are evenly divided into three levels. The Preconventional Level in Kohlberg’s theory is divided into Stage 1, a childhood stage characterized by selfishness, which is not typically found in college populations, and Stage 2, which is characterized by egocentrism and serving one’s own needs. The Conventional Level is then divided into Stage 3, which involves conformity, and Stage 4, which emphasizes law and order. The Postconventional Level is divided into Stage 5, wherein morality is based on a social contract, and Stage 6, which involves principled thinking (Fishkin et al., 1973). As explained by Haan (1975), those with conventional moral reasoning are driven by external sources (e.g., political or religious institutions) whereas those with postconventional moral reasoning are driven by internal sources (e.g., personal moral principles). However, there are weaknesses in Kohlberg’s model. Kurtines and Greif (1974) questioned the reliability and validity of Kohlberg’s original model. Krebs and Denton (2005) argued that Kohlberg’s model failed to predict moral judgments or behaviors and did not account for situational and dispositional variables.

The present study used the *DIT-2*, which differs somewhat from Kohlberg’s original stages of moral reasoning. In the guide for the DIT-2 Bebeau and Thoma (2003) replaced Kohlberg’s stages of moral reasoning with schemas. The Personal Interest Schema corresponded to Kohlberg’s Stages 2 and 3. The Maintaining Norms Schema corresponded to Stage 4, and the Postconventional Schema corresponded to Stages 5 and 6. The present study used the terminology of the DIT-2 rather than that of Kohlberg’s theory. Recently Bailey (2011) used the DIT-2 to explore if participants could predict both the moral reasoning schemas and political orientation of others based on their answers to the DIT-2. He found that participants could better predict moral reasoning schemas than political orientation, giving further credence to the notion that they are two separate constructs.

Moral reasoning has been linked to political ideology though it is not the same construct. Also, conventional moral reasoning has been positively correlated with conservative political ideology, while preconventional and postconventional moral reasoning have been positively correlated with liberal political ideology (Emler, Renwick, & Malone, 1983; Fishkin et al., 1973). However, further research showed that moral reasoning and political ideology were not the same construct. Human rights judgments were best predicted by moral reasoning combined with political ideology, rather than by either variable alone (Raaijmakers & van Hoof, 2006).

The purpose of this study was to explore the effect that a political group’s participation in social networking has on a participant’s willingness to engage in protest and rebellion. Also, the effect of the political group’s religious similarity to the participant was explored. Finally, the participant’s level of moral reasoning was examined as a possible predictor of protest and rebellion. In the current
Jordan | Causes of Revolution

study, a general hypothesis was that all three variables would have a positive effect on participants’ willingness to protest and rebel. Specifically, the following four hypotheses were proposed including one interaction effect and three main effects.

1. Social networking, religious similarity, and moral reasoning would combine to significantly influence participant’s willingness to protest and rebel.

2. Social networking would significantly influence participant’s willingness to protest and rebel.

3. Religious similarity would significantly influence participant’s willingness to protest and rebel.

4. Moral reasoning would significantly influence participant’s willingness to protest and rebel.

Method

Participants
Participants were a convenience sample drawn from a small Midwestern, Christian, Pentecostal university. The sample size included 164 participants (65 men, 99 women). Ages ranged from 17 to 49 with 95% of the sample being 18–24. European Americans constituted 86% of the sample, Hispanic Americans 4.9%, African Americans 2.4%, and people of other ethnic groups the remaining 6.7%. Participants reported their religious denomination; 73.5% were affiliated with Assemblies of God, 19.5% were affiliated with nondenominational churches, and the remaining participants reported other Christian denominations. Participants were asked to characterize their political views with 23.8% reporting very conservative, 50% somewhat conservative, 17.7% neither liberal nor conservative, 7.9% somewhat liberal, and 0.6% very liberal. Although this sample was used primarily for convenience, the sample needed to be homogeneous in regards to political orientation in order to have one political and one religious group with which all participants could identify in order to determine the effects of religious similarity. Participants were recruited through social science and psychology courses. Participants were offered either course credit or extra credit for their participation, and all participants were entered into a drawing for one of eight gift cards. An institutional review board approved the study, and participants were treated according to American Psychological Association ethical guidelines (APA, 2010).

Materials

The study was completed through the online survey company, Qualtrics. Participants were first asked to complete measures of moral reasoning and political ideology in addition to demographic questions.

Demographics. Participants were asked to provide their sex, age, ethnicity, level of education, political affiliation, and religious affiliation.

Religious similarity and social networking. Each group was shown a website or flyer of a student political organization advocating a conservative stance on issues such as health care, taxes, abortion, and same-sex marriage. The organization asked volunteers to engage in various protest behaviors, such as signing a petition and recruiting others. The organization also implied willingness to engage in more extreme behaviors, such as taking up arms. Two groups had a model political organization that professed to be Christian and that gave religious reasons for its position; the other two groups had a model political organization that was not Christian and did not speak of religion at all. In the two groups with a non-Christian model, the political issues of abortion and same-sex marriage were mentioned because they are often seen as religious issues. Also, in two of the groups, the models’ views were conveyed using a website which included several social networking opportunities, such as Facebook and Twitter; the other two groups were shown the models’ views using brochures that focused on traditional methods of political involvement without any opportunities for networking.

Moral reasoning. In order to measure moral reasoning, participants completed the Defining Issues Test 2 (DIT-2; Rest et al., 1999). This measure is based on Kohlberg’s theory of moral reasoning and is adapted from Defining Issues Test 1. The DIT-2 is slightly shorter using only five scenarios instead of six, and it also updates the wording and scenarios. Participants responded to each scenario by indicating what action they would take and the importance of several factors. Participants responded to each scenario by indicating what action they would take and the importance of several factors. In our study, participants were divided into three groups based on which moral reasoning schema they scored highest. Internal reliability for the measure was acceptable according to the sample in Rest et al. study (1999; Cronbach’s alpha .81). According to the guide for the DIT-2, Cronbach’s alpha was between .75 and .85 (Bebeau & Thoma, 2003).

Revolution. In the present study, revolution
was operationally defined as willingness to protest or rebel. Protest was defined as mild forms of disagreement with policies, such as petition and participation in rallies. Rebellion was defined as more extreme forms of protest, such as armed uprising. Participants rated their willingness to engage in six revolutionary behaviors on a scale from 1 (not willing at all) to 5 (completely willing). Behaviors included petitioning a government organization, joining a Facebook group, picketing a government organization, recruiting voters, refusing to obey laws/civil disobedience, and participating in an armed rebellion. The scores on the first four behaviors constituted willingness to protest (maximum score of 20), and the scores on the last two behaviors constituted willingness to rebel (maximum score of 5).

**Design and Procedures**

The design of this study was a 2 (social networking) x 2 (religious similarity) x 3 (moral reasoning) mixed multivariate design with two independent variables, one quasi-independent variable, and two measures of the dependent variable (willingness to protest, willingness to rebel). Participants were sent a link to the survey through their campus email. First, participants were shown the consent form, and asked to continue only if they agreed to participate. Participants were deceived into believing that the political group in the study was real. Participants were then randomly given a link to one of the four conditions (political group website, Christian political group website, political group flyer, or Christian political group flyer). Following that, participants completed the DIT-2. Participants then responded to demographic questions that included political and religious affiliations. Finally, participants indicated their willingness to participate in revolutionary behaviors. At the end of the survey, participants were told that the political group was fictitious and thanked for their participation.

**Results**

**Preliminary Results**

A total number of 247 individuals participated, but many were missing data. Participants with any missing data were eliminated, resulting in 164 participants for the final analyses. Due to the nature of the DIT-2, participants with any missing data could not be scored at all, hence the large number of eliminated participants. All measures were within acceptable ranges for skew and kurtosis (George & Mallery, 2009). There were 35 participants in the group in the Christian model and social networking opportunities. There were 40 participants in the group in the non-Christian model and social networking opportunities. There were 44 participants in the group in the non-Christian model and no social networking opportunities. There were 45 participants in the group in the Christian model and no social networking opportunities. Using the results from the DIT-2, participants were divided into three groups based on their scores on the schema of moral reasoning. Based on this, 38 participants were placed in the personal interest schema group, 86 in the maintaining norms schema, and 40 in the postconventional schema. See Table 1 and Table 2 for group means and standard deviations.

**Main Analyses**

A three-way MANOVA was conducted to determine the effects of the three independent variables on willingness to protest and rebel. Box’s M test was used to assess the assumption of homoscedasticity, which was nonsignificant ($p > .05$). Because the primary interest was in the three-way interaction effect, Roy’s Largest Root uses only one analysis instead of analyzing the variables separately and averaging the result like other tests (Warner, 2008). There was a significant three-way interaction effect, Roy’s Largest Root = .044, Multivariate $F(2, 152) = 3.342$, $p = .038$, $\eta^2_p = .042$, Observed Power ($OP$) = .625. This interaction effect means that protest and rebellion happen more often given the presence of social networking, the presence of religious similarity, and the use of postconventional moral reasoning.

Levene’s test of homogeneity of variance was nonsignificant for the analysis of protest ($p = .740$) but was significant for the analysis of rebellion ($p = .030$). Therefore, the univariate ANOVA

<table>
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<th>TABLE 1</th>
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<tr>
<td><strong>Group Means and Standard Deviations for Protest</strong></td>
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<td><strong>Personal Interest</strong></td>
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<td></td>
</tr>
<tr>
<td>n</td>
</tr>
<tr>
<td>R.S. Yes</td>
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<td>R.S. No</td>
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</table>

Note. Personal Interest, Maintaining Norms, and Postconventional Schemas represent moral reasoning groups. R.S. is Religious Similarity. S.N. is Social Networking.
examined the effects of the independent variables on only the protest dependent variable. The ANOVA results indicated that the triple interaction effect was found in the protest dependent variable, $F(2, 152) = 3.33, p = .038, \eta^2_p = .042, OP = .623$. This demonstrates that the effect found with the MANOVA only holds true for willingness to protest. A main effect was also found for social networking, $F(2, 152) = 4.56, p = .034, \eta^2_p = .029, OP = .564$. Posthoc analyses of moral reasoning using the LSD test showed that the maintaining norms schema group significantly differed from the postconventional schema group with $M_{\text{Difference}} = 1.278, p = .045$; this means that the postconventional schema group had more willingness to protest than the maintaining norms schema group.

### Discussion

Overall, social networking, religious similarity, and moral reasoning significantly affected participants’ willingness to engage in protest. Hypothesis 1 was supported both by the MANOVA and follow-up ANOVA. Social networking, religious similarity, and moral reasoning together contributed significantly to the understanding of the causes of revolutions. However, the data only supported this for political protest, not political rebellion. Hypothesis 2 was supported by the follow-up ANOVA; social networking affected willingness to protest. Hypothesis 3 was not supported; religious similarity alone did not affect willingness to protest. Hypothesis 4 was also not supported; moral reasoning schemas alone did not affect willingness to protest. However, those with a postconventional moral schema did report greater willingness to protest than those with a maintaining norms schema. The triple interaction effect is significant in another way: Revolutions, even simple political protests, are often too complicated to be simplified to one or two causes. The interaction of variables and should examine how causes work together to produce one effect. This study supports the importance of the interaction of factors in predicting revolutionary behavior.

### Limitations

The sample included only American college students from a Christian university, which are not representative of the general population. Also, a large number of participants were eliminated from data analysis due to missing data. Reliability of the DIT-2 for the current study was lacking. The largest limitation was the inability to account for the many variables that historians and sociologists have traditionally given as causes of revolutions. Due to the situational nature of some of those causes, it is uncertain as to whether or not they could be replicated in an experimental setting. Many factors influence revolutions, and some of those factors cannot be studied experimentally. In particular, repression plays a role in revolutions, and that factor could not be brought into an experimental environment easily. Also, the political issues used may not have elicited strong enough reactions to cause participants to be willing to participate in revolutionary behavior. Furthermore, a study by Haan (1975) demonstrated that people do not always use the same stage of moral reasoning for both hypothetical and actual dilemmas. Therefore, measures of hypothetical moral reasoning may not reflect actual moral reasoning because it confrontation with actual moral dilemmas prompts some people to develop new ways of moral thinking. Also, different stages of moral development may be used in different situations (Sparks & Durkin, 1987). Despite these limitations, the findings offer some empirical support for a few possible causes of revolution. Economic factors, such as inflation and lowered standard of living, and political factors, such as inept leadership, should be examined in future research on this topic.

### Future research

Future research should draw on historians’ views on the causes of revolution and revolutions. Although there are few empirical studies of the causes of revolution, historians have long debated the causes of revolution. One historian identified at least six causes of the French Revolution and at least as many for the Russian Revolution of 1917 (Mason, 2005). However, the causes given tend to be either economic or political which was beyond the scope of the present study. Given that historians have long recognized the complex interaction of events that lead to a revolution, it follows that researchers should acknowledge the interaction of variables and should examine how causes work together to produce one effect. This study supports the importance of the interaction of factors in predicting revolutionary behavior.

### Table 2

<table>
<thead>
<tr>
<th>Group Means and Standard Deviations for Rebellion</th>
<th>Personal Interest</th>
<th>Maintaining Norms</th>
<th>Postconventional</th>
</tr>
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<td>S.N. Yes</td>
<td>S.N. No</td>
</tr>
<tr>
<td>n</td>
<td>M</td>
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</tr>
<tr>
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<td>2.2</td>
</tr>
<tr>
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<td>4.1</td>
<td>2.3</td>
</tr>
</tbody>
</table>

Note: Personal Interest, Maintaining Norms, and Postconventional Schemas represent moral reasoning groups. R.S. is Religious Similarity. S.N. is Social Networking.
try to test these views empirically. Sampling was a big hindrance to the current study. Future research should incorporate more diverse populations. The present study is simply one small step toward an empirical understanding of revolutions.

References

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I would like to thank Geoffrey Sutton, my faculty advisor, for all his help and support. I also would like to thank Evangel University Lifeworks for partially funding the project and the Center for Ethical Development for scoring the Defining Issues Test 2.

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