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# **Abortion Attitudes: An Overview of Demographic and Ideological Differences**

**Danny Osborne**

*University of Auckland*

**Yanshu Huang**

*University of Queensland*

**Nickola C. Overall**

*University of Auckland*

**Robbie M. Sutton**

*University of Kent*

**Aino Petterson**

*University of Kent*

**Karen M. Douglas**

*University of Kent*

**Paul G. Davies**

*University of British Columbia*

**Chris G. Sibley**

*University of Auckland*

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*Despite being a defining issue in the culture war, the political psychology of abortion attitudes remains poorly understood. We address this oversight by reviewing existing literature and integrating new analyses of several large-scale, cross-sectional, and longitudinal datasets to identify the demographic and ideological correlates of abortion attitudes. Our review and new analyses indicate that abortion support is increasing modestly over time in both the United States and New Zealand. We also find that a plurality of respondents (43.8%) in the United States are consistently “pro-choice,” whereas 14.8% are consistently “pro-life,” across various elective and traumatic abortion scenarios. We then show that age, religiosity, and conservatism correlate negatively, whereas Openness to Experience correlates positively, with abortion support. New analyses of heterosexual couples further reveal that women’s and men’s religiosity decrease their romantic partner’s abortion support. Noting inconsistent gender differences in attitudes toward abortion, we then discuss the impact of traditional gender-role attitudes and sexism on abortion attitudes and conclude that, rather than misogyny, benevolent*

*sexism—the belief that women should be cherished and protected—best explains opposition to abortion. Our review thus provides a comprehensive overview of the demographic and ideological variables that underly abortion attitudes and, hence, the broader culture war.*

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**KEY WORDS:** abortion, partisanship, ideology, religiosity, benevolent sexism, interpersonal relations, reproductive rights, reproductive autonomy

As the potential reversal of *Roe v. Wade* looms on the horizon in the United States in the wake of three conservative Supreme Court Justice appointments, it is becoming increasingly necessary to investigate the psychological underpinnings of attitudes toward women's reproductive rights. Indeed, legislation over a woman's right to choose has recently been—or is currently being—discussed in countries across the globe including Australia (Kallios, 2021), Ecuador (Daniels, 2019), Germany (Sanyal, 2020), Mexico (BBC News, 2020), New Zealand (Little, 2020), Northern Ireland (McCormack, 2021), Poland (Pronczuk, 2020), and the United States (Borger, 2020). Yet there is a surprising paucity of research examining *why* women's reproductive rights remain divisive despite important, albeit gradual, strides toward gender equality in other areas (e.g., see England et al., 2020; Gomes et al., 2021; Huang et al., 2019). A comprehensive examination of the demographic and ideological correlates of abortion attitudes is therefore needed to advance understanding of an enduring—and hotly contested—issue that is central to the women's rights movement.

Women's rights activists and scholars alike have often attributed public opposition to abortion to misogyny (i.e., hateful views toward women that maintain their lower status vis-à-vis men; see Banet-Weiser, 2018; Berer, 2017; Harrison, 2011)—and for good reasons. For example, a poll of nearly 2,000 likely voters in the 2020 U.S. presidential election found that only 23% of pro-life advocates viewed the #MeToo movement favorably compared to 71% of pro-choice supporters (Supermajority/PerryUdem National Survey, 2019). The same poll also showed that 80% of pro-choice advocates, but only 47% of pro-life advocates, agreed that men and women should be equally represented in positions of power. Further illustrating the misogynistic undertones of the abortion debate, Todd Akin, a former U.S. Representative from Missouri, noted in a televised interview covering various topics including his stance on abortion that, "If it's a legitimate rape, the female body has ways to try to shut that whole thing down" (Eligon & Schwirtz, 2012). These examples highlight the often-misogynistic discourses surrounding public discussion about women's reproductive autonomy.

Contrary to this perspective, we argue in the current review that, rather than misogyny per se, a constellation of demographic and ideological variables that foster traditional gender-role attitudes collectively undermine abortion support. We base our argument on the most complete examination of abortion attitudes to date by integrating new empirical analyses of large-scale, cross-sectional, and longitudinal datasets into an extensive literature review. In taking this integrative approach, we first review work and present new evidence showing that abortion support (a) varies widely based on the underlying reason an abortion is sought, (b) is consistently expressed (rather than opposed) by a plurality of Americans irrespective of the reason for the abortion, and (c) is increasing, albeit modestly, over time. We then investigate a set of demographic and ideological correlates of abortion support which reveals that age, religiosity, and conservatism correlate negatively, whereas Openness to Experience correlates positively, with abortion support. Yet despite being a keystone issue in the women's rights movement, attitudes toward abortion are inconsistently associated with gender. Noting the combination of demographic and ideological variables that emphasize traditional beliefs, we then examine the unique impact that traditional gender roles and sexist attitudes have on abortion support. Our review and theoretical analyses illustrate that subjectively positive views of women who conform to traditional gender

roles (namely, benevolent sexism; Glick & Fiske, 1996, 2001) can undermine support for women's reproductive rights by fostering unrealistic expectations of motherhood. We conclude by positing that the relational rewards promised by benevolent sexism encourage both women and men to oppose abortion which, in turn, has numerous detrimental consequences for women's welfare and broader societal rights.

### Attitudes Toward Reproductive Rights

Abortion is one of the most divisive issues in politics. Both pro-choice advocates who support a woman's right to choose and pro-life proponents who maintain that life begins at conception passionately defend their respective positions. Accordingly, abortion is one of the central issues currently fueling the culture war in the United States (see DiMaggio et al., 1996; Fiorina et al., 2006; Koleva et al., 2012; Lewis, 2017) and elsewhere (Jelen et al., 2017). But abortion has not always been a partisan issue in the United States. For example, conservatism only weakly, if at all, correlated with opposition to abortion in the years after abortion was legalized in the 1973 Supreme Court ruling on *Roe v. Wade* (Granberg & Granberg, 1980; Stimson, 2004). In fact, given the core conservative values of individual rights and limited government, supporting a woman's right to choose could have easily aligned with conservatism. But conservative and liberal elites began to take increasingly distinct positions on abortion in the 1980s (Adams, 1997), with conservatives aggressively pursuing state-level legislation to override abortion rights in the decades since (Bentele et al., 2018). By the 1992 presidential election, consistent partisan differences among the public began to emerge (Hout, 1999). Since then, pro-choice and pro-life advocates have become increasingly sorted along partisan lines in which liberal parties support, whereas conservative parties oppose, abortion (Carmines et al., 2010; Carsey & Layman, 2006; Levendusky, 2009).

Yet the often-used labels of pro-choice and pro-life oversimplify positions on a set of emotionally charged issues marked by strong ambivalence (Alvarez & Brehm, 1995; Craig et al., 2002). Indeed, Table 1 reveals marked variability across four decades in the percentage of respondents from the General Social Survey (GSS) who support (i.e., no/yes) abortion under seven distinct circumstances. Three quarters or more of the sample in each decade supported abortion for the first three medical/trauma-based reasons, whereas the last four "elective" reasons that emphasize the women's choice or financial situation received comparatively less support. That said, support for elective scenarios appears to be increasing over time—a pattern most evident for cases where an abortion is sought "for any reason." Only 33.3% of the sample approved of abortion for any reason in 1978, but support increased steadily over the next three decades to just over 50% in 2018.

#### *Distinguishing between "Types" of Abortion*

Although abortion is often treated by the public as a single issue that people either support or oppose, Table 1 shows that viewing abortion through such a narrow lens belies the complexity of the issue (see also Jozkowski et al., 2018). Accordingly, the literature typically distinguishes between abortion sought for elective reasons (e.g., the woman does not want the child) and for medical/trauma-based reasons including cases where carrying the pregnancy to term would jeopardize the woman's health (i.e., traumatic abortion; Alvarez & Brehm, 1995; Cook et al., 1992; Craig et al., 2002; Hoffmann & Johnson, 2005). We distinguish between "elective" and "traumatic" abortion here because it consolidates differences in support for the seven distinct

**Table 1.** Items Used to Assess Abortion Attitudes in the United States and the Percentage of Participants Who Support Each Scenario in the Given Decade

|   | Approve (1978) | Approve (1988) | Approve (1998) | Approve (2008) | Approve (2018) |
|---|----------------|----------------|----------------|----------------|----------------|
| Please Tell Me Whether or Not You Think It Should Be Possible for A Pregnant Woman to Obtain a Legal Abortion if... |                |                |                |                |                |
| <i>Traumatic abortion</i>   |                |                |                |                |                |
| ...there is a strong chance of serious defect in the baby?  | 82.0%          | 78.8%          | 78.6%          | 74.8%          | 77.4%          |
| ...the woman's own health is seriously endangered by the pregnancy?   | 90.6%          | 88.7%          | 87.9%          | 89.2%          | 90.0%          |
| ...she became pregnant as a result of rape?   | 83.2%          | 81.1%          | 80.1%          | 76.7%          | 79.5%          |
| <i>Elective abortion</i>  |                |                |                |                |                |
| ...she is married and does not want any more children?  | 40.3%          | 39.9%          | 42.3%          | 44.7%          | 51.4%          |
| ...the family has a very low income and cannot afford any more children?  | 47.4%          | 42.0%          | 44.3%          | 42.9%          | 49.3%          |
| ...she is not married and does not want to marry the man?   | 41.1%          | 39.4%          | 42.3%          | 41.2%          | 46.2%          |
| ...the woman wants it for any reason?   | 33.3%          | 36.1%          | 40.9%          | 42.4%          | 50.1%          |

*Note.* Participants responded using a yes/no format. Participants who responded "Don't Know" were excluded from these analyses. Data are derived from the U.S. General Social Survey cumulative data file (1972–2018). *N*s range from (a) 1,469–1,497 in 1978, (b) 924–949 in 1988, (c) 1,778–1,800 in 1998, (d) 1,273–1,301 in 2008, and (e) 1,502–1,524 in 2018.

circumstances displayed in Table 1; it also offers an intuitive shorthand for the diverse factors that inform a woman's decision to have an abortion.<sup>1</sup> In making this important distinction, we are not suggesting that deciding whether or not to have an elective abortion is stress free, nor are we implying that women are left without a choice in cases of traumatic abortion. The added trauma associated with foetal irregularities, danger to the woman's life, and sexual assault does, however, arguably elicit a greater and more complex array of stressors than does the circumstances surrounding elective abortion.

Numerous lines of research demonstrate the importance of distinguishing between elective and traumatic abortion. First, as suggested by the new analyses displayed in Table 1, people support traumatic abortion more than elective abortion (Adebayo, 1990; Hoffmann & Johnson, 2005; Mikołajczak & Bilewicz, 2015). Second, factor analyses of the four-to-seven items used to assess abortion support yield two-factor solutions in various countries including New Zealand (Huang et al., 2016), Russia (Karpov & Kääriäinen, 2005), and the United States (Cook et al., 1992; Craig et al., 2002; Hoffmann & Johnson, 2005; Osborne & Davies, 2012). Third, the two types of abortion scenarios elicit unique forms of ambivalence among pro-choice and pro-life advocates; whereas some pro-life advocates can empathize with pro-choice supporters about traumatic abortion, some pro-choice advocates can appreciate why pro-life supporters oppose elective abortion (Alvarez & Brehm, 1995; Craig et al., 2002, 2005; Martinez et al., 2005).

#### *New, Comprehensive Factor Analysis of the Structure of Abortion Attitudes*

Given the importance of distinguishing between the different reasons for seeking an abortion when assessing public support for women's reproductive autonomy, as well as the implications these differences may have for identifying the predictors of abortion rights, we provide the most comprehensive analysis of the factor structure of abortion attitudes to date. Specifically, we conducted a set of confirmatory factor analyses on the items used to assess support for abortion using the 1972–2018 cumulative data file from the GSS (Smith et al., 2020). The GSS has assessed abortion support in every fielding of the survey since 1972. Because the GSS contains a random sample of adults, the factor structure of participants' abortion attitudes should capture how adults in the United States generally view the distinct scenarios surrounding a woman's decision to terminate a pregnancy. We used the items displayed in Table 1 to estimate and compare two models: (1) a one-factor model in which all seven items loaded onto a single latent variable and (2) a two-factor model in which the first three items loaded onto a latent variable reflecting traumatic abortion support and the remaining four items loaded onto a second latent variable capturing elective abortion support. Because the manifest variables in these models are categorical (i.e., no/yes), we implemented weighted least squares mean and variance-adjusted estimates (Beauducel & Herzberg, 2006) and used the Satorra-Bentler-scaled  $\chi^2$  difference test to identify the best-fitting model (see Satorra & Bentler, 2010).

Table 2 demonstrates that both the one-factor,  $\chi^2_{(14)} = 5,085.300$ ,  $p < .001$ , RMSEA = .089, 90% CI [.087, .091], SRMR = .064, CFI = .997, and the two-factor,  $\chi^2_{(13)} = 783.786$ ,  $p < .001$ , RMSEA = .036, 90% CI [.034, .038], SRMR = .021, CFI > .999, models fit these data well. A Satorra-Bentler-scaled  $\chi^2$  difference test, however, indicated that the two-factor model fit these data better than did the one-factor model,  $\chi^2\Delta_{(1)} = 1,916.585$ ,  $p < .001$ . Thus, although there seems to be a general attitude for or against abortion, people also differentiate between the circumstances surrounding an abortion when evaluating their support for a women's right to choose. These key distinctions are likely to be important in understanding changes in, and predictors of, abortion attitudes.

<sup>1</sup>Elective and traumatic abortion have been given various respective labels including social and physical cases (Bahr & Marcos, 2003) and soft and hard reasons (Adebayo, 1990; Benin, 1985). We use the labels "elective" and "traumatic" abortion because they offer an intuitive description of the diverse circumstances surrounding an abortion and because doing so maintains consistency with our previous work in this area (e.g., see Huang et al., 2014, 2016; Osborne & Davies, 2009, 2012).

**Table 2.** Confirmatory Factor Analysis of Attitudes Toward Abortion

|          | $\chi^2$     | df | RMSEA | RMSEA 90% CI | SRMR | CFI   |
|----------|--------------|----|-------|--------------|------|-------|
| 1 Factor | 5,085.300*** | 14 | .089  | [.087, .091] | .064 | .997  |
| 2 Factor | 783.786***   | 13 | .036  | [.034, .038] | .021 | >.999 |

*Note.* Analyses test models with one and two latent variables. Weighted least square mean and variance adjusted (WLSMV) estimates were used because the manifest indicators are categorical. Data are derived from the U.S. General Social Survey cumulative data file (1972–2018) and contain all participants who completed one or more of the abortion measures ( $N = 45,599$ ). \*\*\* $p < .001$ .

**Table 3.** Fit Statistics for Models With One to Five Latent Classes ( $N = 1,563$ )

| Number of Classes | AIC        | BIC        | aBIC       | $\Delta$ BIC<br>( $k-1$ ) – $k$ | LMR Test     | Entropy |
|-------------------|------------|------------|------------|---------------------------------|--------------|---------|
| 1 Class           | 12,536.021 | 12,573.501 | 12,551.264 | –                               | –            | –       |
| 2 Classes         | 8,000.185  | 8,080.501  | 8,032.849  | 4,551.835***                    | 4,475.762*** | .940    |
| 3 Classes         | 7,501.967  | 7,625.118  | 7,552.052  | 514.218***                      | 505.624***   | .886    |
| 4 Classes         | 7,411.788  | 7,577.773  | 7,479.293  | 106.180***                      | 104.405***   | .826    |
| 5 Classes         | 7,410.361  | 7,619.181  | 7,495.286  | 17.427*                         | 17.136*      | .837    |

*Note.* Data are derived from the U.S. General Social Survey (2018).  $N = 1,563$ . Abbreviations: aBIC, sample-size adjusted Bayesian information criterion; AIC, Akaike information criterion; BIC, Bayesian information criterion; LMR, Lo-Mendell-Rubin (adjusted likelihood ratio) test.

\* $p < .05$

\*\*\* $p < .001$ .

### *New Analyses Identifying “True Believers”*

The previous analyses demonstrate that respondents differentiate between elective and traumatic abortion when expressing their views on women’s reproductive autonomy. Yet the terms “pro-choice” and “pro-life” imply that people express distinct *patterns* of abortion support. For example, some may be “true believers” who either (a) invariably support a woman’s right to choose or (b) think that abortion is always wrong. Others may support abortion when there is a serious anomaly in the fetus or when carrying the pregnancy to term risks the woman’s life (i.e., traumatic reasons) but oppose abortion for all other reasons. Other combinations may also exist in which abortion is deemed acceptable in only some conditions. Latent class analysis, a type of person-centered analyses that identifies unique response patterns to survey items (Collins & Lanza, 2010; Goodman, 2002; Osborne & Sibley, 2017), can (a) identify the number of latent classes that underly responses to a set of survey items and (b) estimate the proportion of the sample who belong to each unique class. Accordingly, these analyses can increase understanding of how people simultaneously evaluate the separate traumatic and elective reasons why a woman might seek an abortion and, thus, identify previously unknown patterns of abortion support.

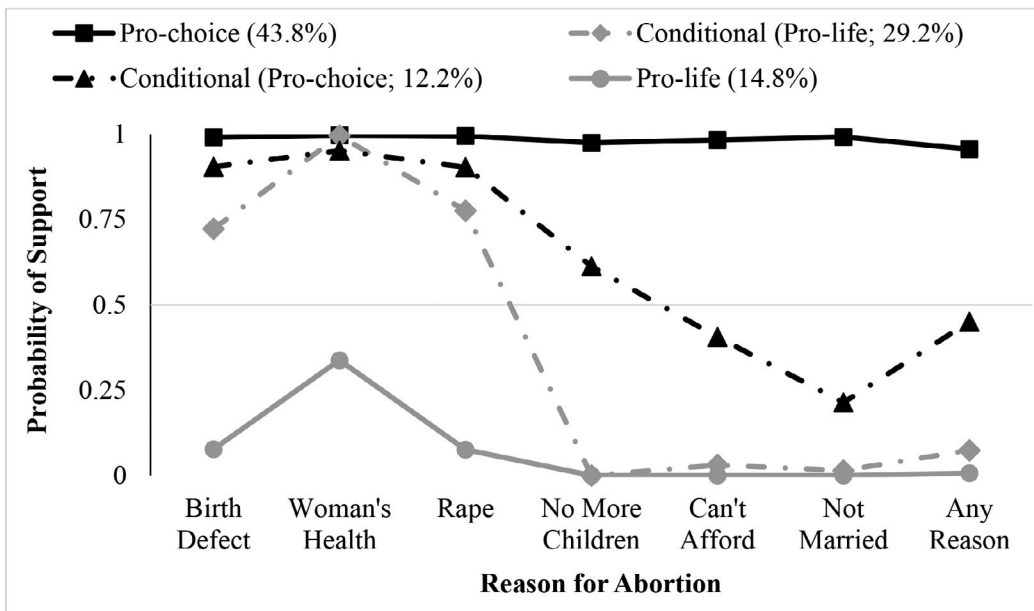
To identify the different types of abortion support in the United States, we used the 2018 GSS ( $N = 1,563$ ) to estimate between one and five unique response patterns underlying participants’ support for the seven distinct abortion scenarios shown in Table 1. To ensure that our models reached a global (vs. local) maximum, we estimated each model using 500 initial stage starts, 50 initial stage iterations, and 20 final stage optimizations. Model fit was then assessed based on model parsimony and the Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), and sample-size-adjusted BIC (aBIC), noting that the best-fitting model will yield the lowest information criteria. Based on these criteria, Table 3 reveals that a four-class solution fit these data best. Whereas the AIC, BIC, and aBIC declined with each additional latent class up to the model with four latent classes,

**Table 4.** Average Latent Class Probabilities for Most Likely Latent Class Membership (Row) by Latent Class (Column)

| Assigned Class |                             |     |             | Actual Class Membership |             |             |             |
|----------------|-----------------------------|-----|-------------|-------------------------|-------------|-------------|-------------|
| Membership     | Class Name                  | N   | % of Sample | 1                       | 2           | 3           | 4           |
| 1. Class 1     | Pro-choice                  | 685 | 43.8        | <b>.962</b>             | .004        | .033        | .000        |
| 2. Class 2     | Conditional<br>(Pro-life)   | 456 | 29.2        | .000                    | <b>.847</b> | .110        | .043        |
| 3. Class 3     | Conditional<br>(Pro-choice) | 191 | 12.2        | .050                    | .063        | <b>.882</b> | .005        |
| 4. Class 4     | Pro-life                    | 231 | 14.8        | .000                    | .107        | .003        | <b>.890</b> |

Source: The U.S. General Social Survey (2018). *N* = 1,563.

Bolded values reflect the average estimated probability that participants were classified in the “correct” latent class.



**Figure 1.** Estimated probability of supporting a woman’s right to choose abortion under the given scenario as a function of membership in the given latent class. Source: The U.S. General Social Survey (2018). *N* = 1,563. See Table 1 for item wording.

both the BIC and aBIC *increased* when adding a fifth latent class. The model with five latent classes also encountered estimation problems which rendered an unstable solution.

Table 4 provides further support for the four-class solution. On-diagonal values reveal the average probability that participants assigned to the given latent class were categorized correctly, whereas the off-diagonal values capture the average probability that participants were assigned to the wrong latent class. For example, participants assigned to Class 1 had a 96.2% probability of being correctly categorized in Class 1, but only a 0.4% chance of being miscategorized in Class 2. Given the high values displayed along the diagonals and the low values displayed along the off-diagonals, these results indicate that participants were highly likely to be categorized correctly and highly unlikely to be miscategorized in another latent class.

To better understand the four response patterns underlying abortion attitudes, Figure 1 plots the mean probability of supporting abortion under each of the seven scenarios assessed in the GSS (see Table 1) as a function of participants’ most likely latent class membership. Class 1 was the most



populous class (43.8% of the sample) and captured those who supported a woman's right to choose across all traumatic and elective scenarios. We labeled this first class *Pro-choice*. Class 2 was the second largest class (29.2% of the sample) who, unlike the *Pro-choice* class, opposed abortion under the four elective scenarios. But because Class 2 made exceptions to their pro-life stance and supported all three traumatic reasons for an abortion, we labeled this class *Conditional (Pro-life)*. Class 3 was the smallest latent class (12.2% of the sample). Like those in the *Pro-Choice* and *Conditional (Pro-life)* classes, these participants supported a woman's right to choose under the three traumatic scenarios. But the participants in Class 3 expressed varying support for the four elective scenarios, only clearly departing from their pro-choice stance when abortion was sought because the woman was not married. Accordingly, we labeled this class *Conditional (Pro-choice)*. Finally, Class 4 was the second smallest response pattern (14.8% of the sample). Because participants in this class universally opposed abortion, we labeled this group *Pro-life*.

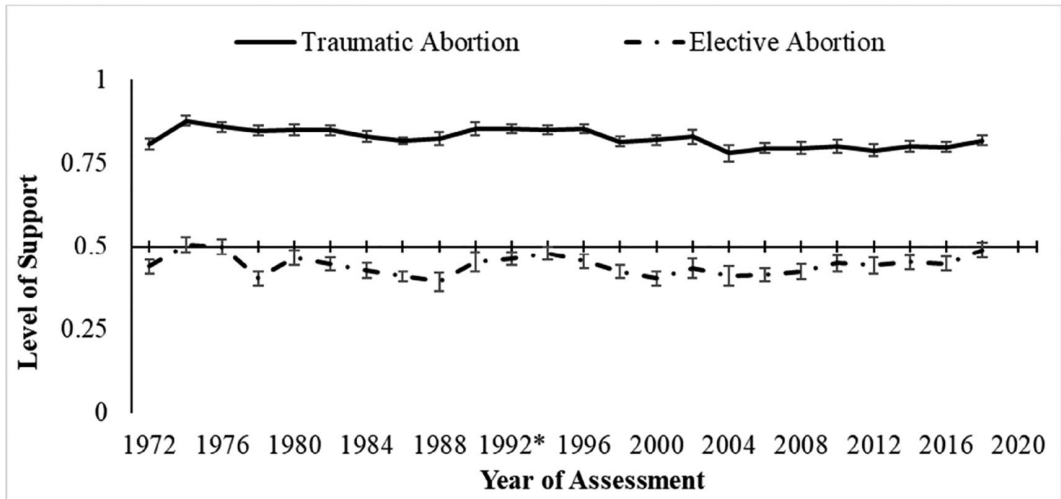
These new person-centered analyses offer novel insights into abortion attitudes. First, they suggest that four unique response patterns underlay abortion support (at least in the United States). Although a slight majority (58.6%) of participants were "true believers" who consistently either supported (43.8%) or opposed (14.8%) abortion *irrespective of the reason*, over 40% of the sample held nuanced views in which their support depended on the reasons for the abortion. Most notably, the largest class (i.e., 43.8% of the sample) offered unconditional support for a woman's right to choose; a further 41.4% of the sample supported abortion under traumatic circumstances. That less than 15% of the sample opposed abortion under all scenarios implies that the recent wave of restrictive state-level abortion legislation in the United States (see Bentele et al., 2018) conflicts with the views of the vast majority of the public. Second, these results imply that the central cleavage in the abortion debate focuses on elective abortion. Indeed, three out of the four latent classes (reflecting over 85% of the sample) emphatically supported abortion for traumatic reasons. Together, these analyses identify unique response patterns underlying attitudes toward women's reproductive rights and further illustrate the need to differentiate between traumatic and elective abortion when investigating abortion attitudes.

#### *New Analyses Examining Population-Level Changes in Abortion Support Over Time in the United States*

Although the analyses presented in the previous sections provide an overview of elective and traumatic abortion support at a particular moment in time, little is known about how abortion attitudes evolve over time (but see Jelen, 2017). To update our understanding of population-level changes in the United States over time with the most recent data available, we present new analyses of the 1972–2018 cumulative datafile from the GSS (Smith et al., 2020). Because our analyses in the prior sections showed that two factors are needed to capture abortion support and that the critical distinction between latent classes focuses on differences in traumatic and elective abortion support, we calculated the mean support for traumatic abortion and elective abortion.<sup>2</sup> A total of 64,814 participants reported their abortion attitudes across the 48 years in which these six-to-seven questions were asked, with a range of 1,372 to 4,510 participants ( $M = 2,025$ ,  $SD = 718.47$ ) who completed the study each year.

Figure 2 displays Americans' mean levels of abortion support biennially over the 1972 to 2018 period (with their corresponding 95% Confidence Intervals [CIs]). Note that each time point reflects a *new* sample of participants rather than assessing support from the same person over time. The GSS also skipped a few annual assessments between 1972 and 1994 (i.e., surveys

<sup>2</sup>The first three items in Table 1 capture support for traumatic abortion, whereas the last four items reflect support for elective abortion. Because the final item (i.e., the woman wants an abortion for any reason) was added to the GSS in 1977, mean levels of support for elective abortion between 1972 and 1976 are only based on a three-item measure of elective abortion support).



**Figure 2.** Mean levels of support (0 = No; 1 = Yes) for elective and traumatic abortion in the United States from 1972 to 2018. Data are derived from the U.S. General Social Survey cumulative data file and plot the average support for the multi-item elective and traumatic abortion measures at each biennial time point ( $N = 64,814$ ). Because the elective abortion item, “the woman wants [an abortion] for any reason,” was first asked in 1977, the measure of elective abortion support from 1972 to 1976 was based on only three (rather than four) items. \*Data were not collected in 1986 or 1992. As such, the average of the adjacent years (e.g., 1991 and 1993) were used to impute a mean level of support for the given year.

were not conducted in 1979, 1981, and 1992; abortion attitudes were not assessed in 1986), and switched to biennial assessments in 1994. Nonetheless, because the GSS is based on a random sample, these analyses provide a general view of fluctuations in population-level support for elective and traumatic abortion in the United States over an extended period.

We highlight three noteworthy elements of these results. First, a one-way analysis of variance (ANOVA) using survey year as a between-participants factor revealed that elective ( $F_{(30, 45302)} = 7.788$ ,  $p < .001$ ,  $\eta^2 = .005$ ) and traumatic ( $F_{(30, 45411)} = 9.610$ ,  $p < .001$ ,  $\eta^2 = .006$ ) abortion support varied significantly across time. Second, the pattern displayed in Figure 2 indicates a small increase in elective abortion support over time. A follow-up independent-samples  $t$ -test confirmed that elective abortion support was higher in 2018 ( $M = 0.49$ ,  $SD = 0.46$ ; 95% CI [0.47, 0.51]) than in 1972 ( $M = 0.44$ ,  $SD = 0.45$ ; 95% CI [0.42, 0.46]);  $t_{(3127)} = 3.15$ ,  $p = .002$ ). Third, traumatic abortion support did not differ in 2018 ( $M = 0.82$ ,  $SD = 0.32$ ; 95% CI [0.80, 0.83]) relative to 1972 ( $M = 0.81$ ,  $SD = 0.34$ ; 95% CI [0.79, 0.83]);  $t_{(3142)} = 0.87$ ,  $p = .38$ ), implying that the broad support for traumatic abortion observed across latent classes in the prior section was consistent over time. Collectively, these results replicate and extend the new analyses presented in the previous section by illustrating that the variability in abortion support is primarily focused on elective abortion. Moreover, divisions over elective abortion have been evident (at least in the United States) for nearly half a century. Finally, Americans’ support for women’s reproductive rights—at least in terms of elective abortion—increased slightly over the last 48 years but remains tepid on average (e.g., around 50% of participants support elective abortion).

#### *New Analyses Examining Population-Level Changes in Abortion Support Over Time in New Zealand*

Analyses of decades of cross-sectional data can provide insights into population-level trends in attitudes toward abortion but have some limitations. In particular, the small increase in elective

abortion support shown in Figure 2 may reflect younger generations replacing less permissive older generations (generational replacement; e.g., Osborne et al., 2011), historical events like the women's rights movement affecting distinct cohorts (cohort effects; e.g., Milojev & Sibley, 2017; Zubielevitch et al., 2022), or powerful cultural shifts in attitudes toward women that affect everyone *irrespective* of their age or cohort (period effects; e.g., Blanchard et al., 1977). But it is also possible that people's attitudes change *within* people. For example, corresponding within-person analyses of seven annual waves of data from New Zealand illustrate that people tend to adopt more egalitarian views toward women over time (Huang et al., 2019). Additional evidence about *within-person* changes in abortion attitudes—evidence that requires longitudinal panel data—would help compliment and extend the broad population-based changes identified in the previous section by showing that *the same people* are becoming more or less supportive of abortion over time.

To assess the extent to which a person's attitude changes over time, we examined *within-person* change in abortion support by turning to longitudinal panel data collected in New Zealand. Like in the United States, abortion attitudes have not always been split across party lines. In fact, many of the early studies examining attitudes toward abortion in New Zealand failed to even assess participants' political views (e.g., see Facer et al., 1973; Perry & Trlin, 1982). Inspired by the global women's rights movement during the late 1960s and early 1970s, a renewed interest in abortion laws emerged in New Zealand that mobilized both the pro-choice and pro-life movements (Trlin, 1975). But unlike in the United States and other Western democracies, multiple bids to overturn laws that criminalized abortion failed to materialize in New Zealand for several decades (for an overview of the abortion debate in New Zealand, see McCulloch, 2013). Thus, abortion remained part of the 1961 Crimes Act for nearly 60 years and was permitted only following consultation with two medical practitioners who deemed the pregnancy to be harmful to the woman's mental and/or physical health. After a groundswell of support, including a 2019 survey indicating that nearly 70% of New Zealanders supported the decriminalization of abortion (O'Brien, 2019), the Labour-led government removed abortion from the Crimes Act in 2020.

Given the lack of clear partisan cues from the political elites and ensuing consistency in abortion legislation over the last 60 years, New Zealand offers an interesting counterpoint to the previous analyses based on data derived from the United States—a country where abortion has become an increasingly focal point in the culture war (DiMaggio et al., 1996; Lewis, 2017). Thus, we extend the literature on abortion attitudes by presenting new analyses of data from the New Zealand Attitudes and Values Study (NZAVS) investigating within-person changes in abortion support in a nation with limited evidence of political polarization (Satherley et al., 2020). The NZAVS is an ongoing annual-based longitudinal panel study that began in 2009 and is derived from a random sample of the electoral roll.<sup>3</sup> As a result of multiple booster samples to increase the size and diversity of the sample, 67,690 participants completed one or more waves of the study during the last 11 years (see Satherley et al., 2015, for an analysis of sample attrition).

Although the NZAVS began in 2009, two items measuring attitudes toward elective and traumatic abortion were added to the omnibus survey in 2011. Participants were asked to report “how strongly you oppose or support” these two issues on a 1 (*strongly oppose*) to 7 (*strongly support*) scale: (1) “legalized abortion for women, regardless of the reason” and (2) “legalized abortion when the woman's life is endangered.” Although the response format differs from the no/yes format used in the GSS, the wording of these two items parallel one elective abortion item and one traumatic abortion item, respectively, in the GSS and can thus illustrate general similarities and differences between the two countries. These two items were included in the NZAVS for nine consecutive years (i.e., from 2011 to 2019), providing a large dataset to examine the average amounts of within-person change in abortion attitudes over an extended period.

<sup>3</sup>Registration on the electoral roll is mandatory in New Zealand, save for case-by-case exceptions for privacy concerns. As such, randomly selecting participants from the electoral roll is as close to a random sample of the New Zealand population as one can obtain.

**Table 5.** Model Fit Indices for Growth Curves of Elective and Traumatic Abortion Support in New Zealand

|                                     | Log-Likelihood | AIC         | BIC         | aBIC        |
|-------------------------------------|----------------|-------------|-------------|-------------|
| Elective abortion ( $N = 65,940$ )  |                |             |             |             |
| Linear                              | -339,827.867   | 679,667.735 | 679,722.314 | 679,703.246 |
| Quadratic                           | -339,552.363   | 679,124.727 | 679,215.692 | 679,183.911 |
| Traumatic abortion ( $N = 65,884$ ) |                |             |             |             |
| Linear                              | -283,630.171   | 567,272.343 | 567,326.917 | 567,307.848 |
| Quadratic                           | -283,427.658   | 566,875.317 | 566,966.273 | 566,934.493 |

*Note.* Analyses include the 66,036 participants who completed our measures of either elective ( $N = 65,940$ ) or traumatic ( $N = 65,884$ ) abortion support at one or more waves of the New Zealand Attitudes and Values Study.

Abbreviations: aBIC, sample-size adjusted Bayesian information criterion; AIC, Akaike information criterion; BIC, Bayesian information criterion.

Of participants who completed one or more of these nine annual assessments, 66,036 responded to either the elective abortion item ( $N = 65,940$ ) or the traumatic abortion item ( $N = 65,884$ ). Of these 66,036 participants, 41,419 were women and 24,376 were men, with a mean age of 42.49 years ( $SD = 14.27$ ) in 2011. Participants identified as New Zealand European (79.7% of the sample), Māori (12.4% of the sample), Asian (5.3% of the sample), or Pacific Islander (2.6% of the sample). Finally, 56.5% of participants reported their relationship status as “married” at some point during the study.

To identify the average amount of within-person change in abortion attitudes over our nine annual assessments, we estimated two separate latent growth models examining changes in elective and traumatic abortion support over time. For each model, we estimated a slope in which the rate of change followed a linear pattern. We then estimated a subsequent model in which the slope followed a quadratic function. To evaluate the fit of these two models, we followed Grimm and colleagues’ (2017) recommendations and selected the model with the smallest Akaike information criterion (AIC) and/or Bayesian information criterion (BIC). Table 5 reveals that the growth curves containing a quadratic slope fit these data better than did the models with a linear slope for both elective and traumatic abortion support.

Table 6 shows the intercepts and rates of change for elective and traumatic abortion support. The coefficients for the linear and quadratic slopes in the quadratic model reflect the average rate of change in the given abortion attitude on a year-to-year basis. These results indicate that elective abortion support increased by an average of 1/10th of a point on the 1–7 scale every year throughout the course of the nine annual assessments ( $b = 0.100$ ,  $SE = 0.004$ , 95% CI [0.093, 0.107],  $p < .001$ ), whereas the quadratic slope suggests that the size of this year-to-year increase decreased by  $-0.009$  ( $SE = 0.000$ , 95% CI [-0.010,  $-0.008$ ],  $p < .001$ ) each year. Likewise, support for traumatic abortion increased by an average of 0.052 ( $SE = 0.003$ , 95% CI [0.046, 0.058],  $p < .001$ ) points each year, but this rate of change decreased significantly by  $-0.004$  ( $SE = 0.000$ , 95% CI [-0.005,  $-0.003$ ],  $p < .001$ ) points annually. Based on these fixed-effects estimates, we generated the model-implied rate of change in both elective and traumatic abortion support at quarterly increments from October 2011 to October 2019.

As shown in Figure 3, mean levels of elective and traumatic abortion support in 2011 (i.e., our first assessment of abortion attitudes in the NZAVS) were well above the midpoint of our 7-point scale (i.e., 4.00). Consistent with research from the United States and other countries internationally (e.g., see Bahr & Marcos, 2003; Benin, 1985; Bilewicz et al., 2017; Craig et al., 2002; Mikołajczak & Bilewicz, 2015; Mosley, Schulz, et al., 2020), New Zealanders on average supported traumatic abortion more than elective abortion.

Keeping in mind that Figures 2 and 3 respectively display between- and within-person change, the two figures illustrate important differences and similarities between the United States and New Zealand. Perhaps the most notable difference between countries is in the mean levels of support for *elective* abortion. Whereas slightly less than half of Americans opposed elective abortion in 2018 (i.e., 49.0%), the average elective abortion support among New Zealanders at the corresponding timepoint

**Table 6.** Latent Growth Model Assessing Change in Support for Elective and Traumatic Abortion in New Zealand Across Nine Annual Assessments

|                                | Elective Abortion Support ( $N = 65,940$ ) |           |                  | Traumatic Abortion Support ( $N = 65,884$ ) |           |                  |
|--------------------------------|--|-----------|------------------|---|-----------|------------------|
|                                | <i>b</i>                                   | <i>SE</i> | CI [95%]         | <i>b</i>                                    | <i>SE</i> | CI [95%]         |
| Linear model                   |  |           |                  |   |           |                  |
| Fixed effects                  |  |           |                  |   |           |                  |
| Intercept                      | 4.969***                                   | 0.010     | [4.950, 4.989]   | 6.204***                                    | 0.007     | [6.190, 6.218]   |
| Linear slope                   | 0.043***                                   | 0.002     | [0.040, 0.045]   | 0.026***                                    | 0.001     | [0.023, 0.028]   |
| Random effects                 |  |           |                  |   |           |                  |
| Intercept                      | 3.323***                                   | 0.026     | [3.271, 3.374]   | 1.327***                                    | 0.024     | [1.279, 1.375]   |
| Linear slope                   | 0.018***                                   | 0.001     | [0.017, 0.020]   | 0.008***                                    | 0.001     | [0.007, 0.010]   |
| Covariances                    |  |           |                  |   |           |                  |
| Intercept–Linear slope         | –0.071***                                  | 0.003     | [–0.078, –0.064] | –0.050***                                   | 0.003     | [–0.056, –0.043] |
| Quadratic model                |  |           |                  |   |           |                  |
| Fixed effects                  |  |           |                  |   |           |                  |
| Intercept                      | 4.932***                                   | 0.010     | [4.921, 4.953]   | 6.189***                                    | 0.008     | [6.174, 6.204]   |
| Linear slope                   | 0.100***                                   | 0.004     | [0.093, 0.107]   | 0.052***                                    | 0.003     | [0.046, 0.058]   |
| Quadratic slope                | –0.009***                                  | 0.000     | [–0.010, –0.008] | –0.004***                                   | 0.000     | [–0.005, –0.003] |
| Random effects                 |  |           |                  |   |           |                  |
| Intercept                      | 3.335***                                   | 0.027     | [3.283, 3.387]   | 1.331***                                    | 0.025     | [1.282, 1.379]   |
| Linear slope                   | 0.045***                                   | 0.003     | [0.039, 0.052]   | 0.032***                                    | 0.003     | [0.025, 0.039]   |
| Quadratic slope                | 0.001***                                   | 0.000     | [0.001, 0.001]   | 0.000***                                    | 0.000     | [0.000, 0.001]   |
| Covariances                    |  |           |                  |   |           |                  |
| Intercept w/Linear slope       | –0.097***                                  | 0.006     | [–0.109, –0.085] | –0.073***                                   | 0.007     | [–0.086, –0.060] |
| Intercept w/Quadratic slope    | 0.005***                                   | 0.001     | [0.003, 0.007]   | 0.004**                                     | 0.001     | [0.002, 0.006]   |
| Linear slope w/Quadratic slope | –0.004***                                  | 0.001     | [–0.005, –0.003] | –0.003***                                   | 0.001     | [–0.004, –0.002] |

*Note.* Models estimated using Maximum likelihood with robust estimation of standard errors. Disturbances of the indicators for the scale means at each wave scale were constrained to equality over time. Missing data were estimated using full-information maximum likelihood and assuming data were missing at random. Analyses include the 66,036 participants who completed our measures of either elective ( $N = 65,940$ ) or traumatic ( $N = 65,884$ ) abortion at one or more waves of the New Zealand Attitudes and Values Study.

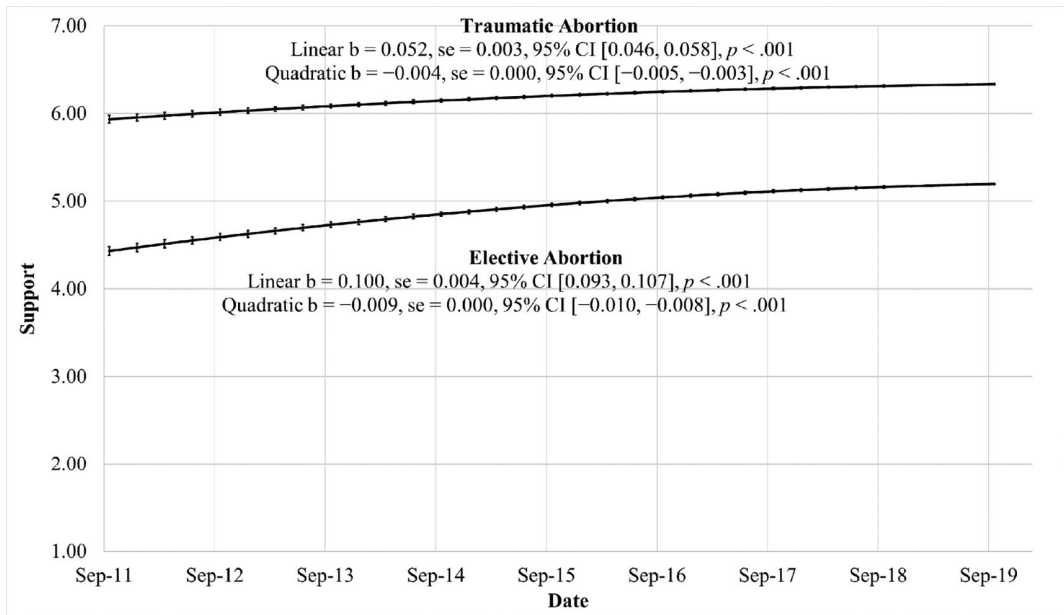
\*\* $p < .01$

\*\*\* $p < .001$ .

is over a full point *above* the scale's midpoint (i.e., 5.162 out of 7,  $SE = 0.008$ , 95% CI [5.146, 5.178],  $p < .001$ ). Nonetheless, New Zealanders and Americans both overwhelmingly support abortion for traumatic reasons. In the United States, at least 75% of the public in any given year express support for a woman's right to choose under traumatic circumstances. Support for traumatic abortion was also nearly two points above the midpoint of the scale among New Zealanders at the start of our assessments and continued to climb annually over the nine assessments. Elective abortion support also slowly increased in both countries over the last nine annual assessments, although the longer temporal focus of the GSS suggests that the increase in the United States may reflect a return to the support seen in the mid-1990s.

### Summary

Despite the seemingly intuitive labels of “pro-choice” and “pro-life,” abortion support varies considerably depending on why the abortion is sought. Whereas people generally support traumatic abortion (e.g., cases where carrying the pregnancy to term will endanger the woman's life), relatively less support is found for elective cases where the woman wants an abortion regardless of the reason. The new comprehensive confirmatory factor analysis we presented here



**Figure 3.** Rate of change in abortion support in New Zealand from October 2011 to October 2019. Analyses include participants who completed our measures of elective ( $N = 65,940$ ) and traumatic ( $N = 65,884$ ) abortion support at one or more waves of the New Zealand Attitudes and Values Study.

demonstrates the bidimensional nature of abortion attitudes. Our latent class analysis further illustrates the importance of this distinction and shows that the plurality of respondents from the United States (i.e., 43.8%) consistently support both elective and traumatic abortion, whereas less than 15% of the sample oppose abortion irrespective of the reason. This is a key distinction because, as our complimentary cross-sectional and longitudinal analyses showed, traumatic abortion support has been—and remains—high in both the United States and New Zealand. In contrast, although elective abortion support has slowly increased over the last 50 years in the United States and the last 10 years in New Zealand, a sizable minority of the public (i.e., ~49% of the United States) oppose elective abortion.

### Predictors of Abortion Attitudes

Given the polarizing nature of the abortion debate (DiMaggio et al., 1996; Hout, 1999; Layman et al., 2010), a growing literature has developed to identify the predictors of abortion attitudes. Initially, much of this work focused on demographic cleavages in abortion support but has since progressed to include important ideological factors that predict attitudes toward women’s reproductive rights. In reviewing this literature, we focus on research investigating differences in abortion support based on (a) age cohort, (b) gender (c) religiosity, (d) political partisanship and/or ideology, and (e) personality. To provide the most complete examination of the correlates of abortion attitudes to date, we also integrate new analyses examining (a) the impact of age and parenthood on abortion support across the adult lifespan, (b) the effects of religion on abortion support both across religious affiliations and within intimate partner relationships, (c) partisan differences in abortion attitudes within a multiparty context, and (d) the direct and indirect effects (via conservatism) of Openness to Experience on support for elective and traumatic abortion.

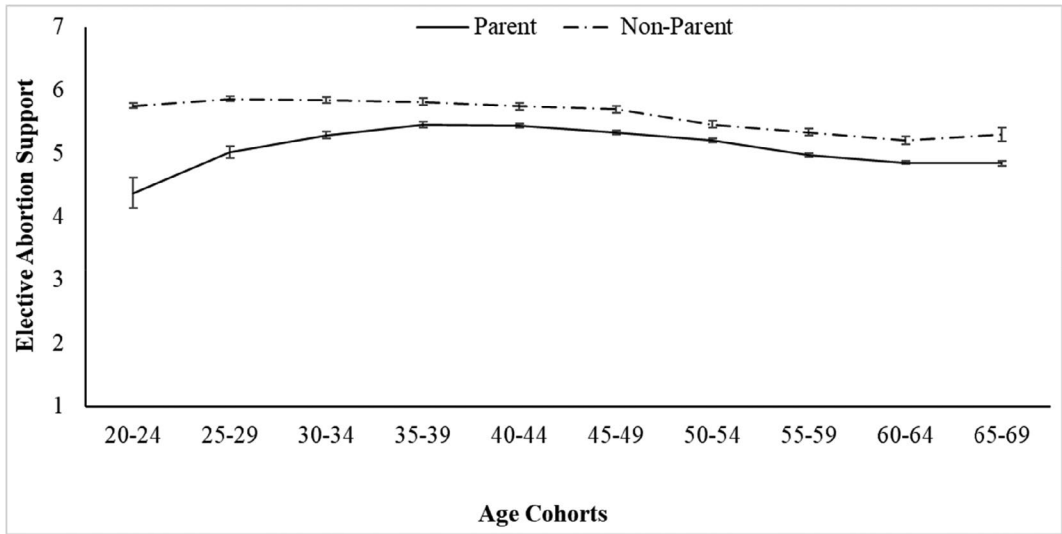
### Age Cohort Differences

In the previous section, our new cross-sectional and longitudinal analyses revealed that abortion support has been increasing over time in both the United States (for elective abortion) and New Zealand (for both elective and traumatic abortion). Although informative, these analyses cannot illustrate whether specific age cohorts are more or less supporting of abortion. Yet the gradual population-level increases in abortion support observed above may be due to younger cohorts replacing older, less permissive, cohorts. Consistent with this perspective, Barringer and colleagues (2020) examined data from the GSS on abortion support among 18- to 32-year-olds from three cohorts: Baby Boomers (born between 1946 and 1964), Gen Xers (born between 1965 and 1980), and Millennials (born between 1981 and 1996). Consistent with the liberalizing effects of the 1960s' counterculture movement, Baby Boomers were *more* supportive of abortion than Millennials and Gen Xers. However, because these analyses focused on just three cohorts, it is unclear whether differences in abortion support exist across a wider range of age cohorts.

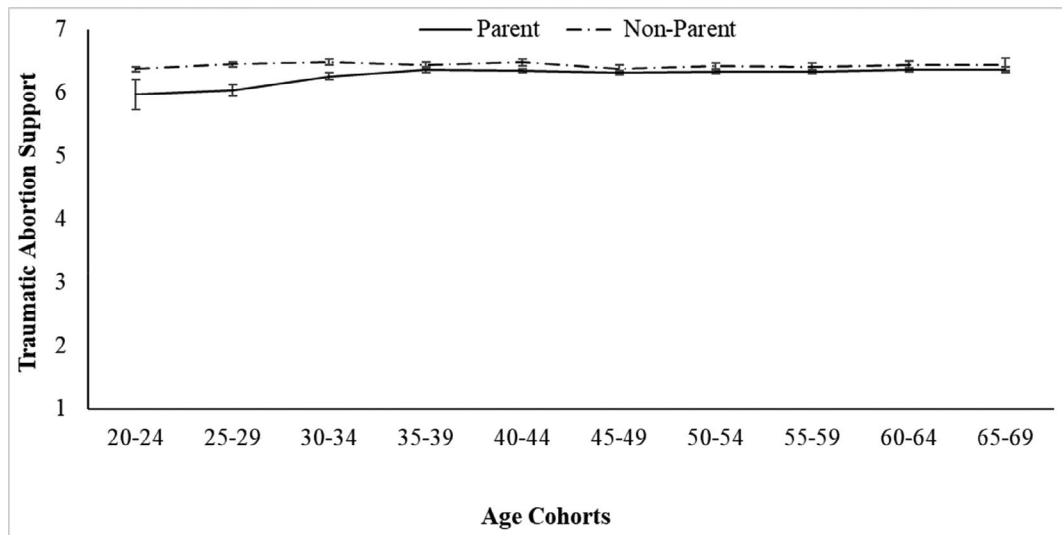
To investigate this possibility in a distinct national context, we present new analyses of data from Time 10 of the NZAVS examining age cohort differences in abortion support. We focused on Time 10 because it was the largest sample to date that enabled us to estimate support for elective and traumatic abortion at 10 separate 5-year cohorts spanning across 20 to 69-year-olds. We also extend previous analyses of age differences in abortion support by investigating the interactive effects of age cohort and parenthood on support for women's reproductive autonomy. Because the transition to parenthood entails a substantial change in social identities that emphasize conservative political leanings (see Katz-Wise et al., 2010; Kaźmierczak & Karasiewicz, 2019; Nomaguchi & Milkie, 2003), parents should express less support for abortion than do nonparents (see also Elder & Greene, 2016). In total, 43,769 participants (30,923 parents and 12,846 nonparents) completed the item assessing elective abortion support, and 43,679 participants (30,851 parents and 12,822 nonparents) completed the item assessing traumatic abortion support.

As shown in Figure 4, parents supported elective abortion less than did nonparents ( $M = 5.12$   $SD = 2.02$  vs.  $M = 5.66$ ,  $SD = 1.85$ , respectively),  $F_{(1, 43749)} = 283.844$ ,  $p < .001$ ,  $\eta_p^2 = .006$ . There was also a main effect of age cohort such that younger cohorts supported elective abortion less than did older cohorts,  $F_{(9, 43749)} = 37.012$ ,  $p < .001$ ,  $\eta_p^2 = .008$ . The main effect of age cohort was, however, qualified by an interaction with parental status,  $F_{(9, 43749)} = 6.632$ ,  $p < .001$ ,  $\eta_p^2 = .001$ . Parents were more opposed than nonparents to elective abortion among the younger cohorts (i.e., the 20–24-year-old cohort to the 30–34-year-old cohort). Although nonparents expressed more support than did parents for elective abortion across all age cohorts, the difference in elective abortion support between parents and nonparents narrowed considerably as support declined among the older cohorts (i.e., the 35–39-year-old cohort and older).

Figure 5 displays a similar, albeit muted, pattern of support for traumatic abortion. Specifically, parents again expressed less support for traumatic abortion than did nonparents ( $M = 6.33$   $SD = 1.29$  vs.  $M = 6.43$ ,  $SD = 1.22$ , respectively),  $F_{(1, 43659)} = 68.165$ ,  $p < .001$ ,  $\eta_p^2 = .002$ . There was also a small, albeit statistically significant, main effect of age cohort such that the younger cohorts expressed more support than older cohorts for traumatic abortion,  $F_{(9, 43659)} = 4.155$ ,  $p < .001$ ,  $\eta_p^2 = .001$ . The main effect of age cohort was, however, again qualified by an interaction with parental status,  $F_{(9, 43659)} = 4.364$ ,  $p < .001$ ,  $\eta_p^2 = .001$ . Parents were more opposed than nonparents to traumatic abortion among the younger cohorts (i.e., the 20–24-year-old cohort to the 30–34-year-old cohort), but the difference began to narrow at the 30–34-year-old cohort and practically disappeared by the 45–49-year-old cohort. In other words, nonparents' support for abortion tended to decrease over time, whereas parents were noticeably less supportive of abortion in early adulthood, increased their support by early middle age, and became less supportive as they aged from their mid-30s and onward.



**Figure 4.** Mean levels of elective abortion support in New Zealand as a function of age cohort and parental status ( $N = 43,769$ ). Data are derived from Time 10 of the New Zealand Attitudes and Values Study.



**Figure 5.** Mean levels of traumatic abortion support in New Zealand as a function of age cohort and parental status ( $N = 43,679$ ). Data are derived from Time 10 of the New Zealand Attitudes and Values Study.

*Gender-Based Differences*

In addition to investigating the impact of age on abortion support, researchers have examined the possibility that abortion support is split across gendered lines. Surprisingly, although abortion is often framed as a woman’s issue, gender differences in abortion support are small and/or inconsistent (Chaney et al., 1998; also see Huddy et al., 2008, for a review of the [sometimes negligible] gender-based gap in political attitudes). For example, both Patel and Johns (2009) and Patel and Kooverjee (2009) found that women expressed more support for abortion than did men (also see Loll & Hall,



2019). Lizotte (2015) also identified a small, albeit reliable, gender difference in abortion attitudes—but only after adjusting for women’s tendency to be more religious than men. Others, however, have found no gender differences (e.g., see Bilewicz et al., 2017; Esposito & Basow, 1995; Jelen & Wilcox, 1997; Mikołajczak & Bilewicz, 2015; Strickler & Danigelis, 2002; Szafran & Clagett, 1988; Wall et al., 1999; Zucker, 1999) or differences whereby men express *more* (not less) support for abortion than do women (Misra & Panigrahi, 1998). For example, Huang and colleagues (2014) found that there were no gender differences in support for elective abortion among a random sample of adults, but that *men* expressed *more* support than women for traumatic abortion. Jelen et al. (2002) also found that men and working women expressed similar levels of support for abortion, yet women who did not participate in the workforce *opposed* abortion more than did their employed male and female counterparts. Thus, research assessing gender differences in abortion support finds surprisingly inconsistent results. Accordingly, we include gender as a covariate across the new analyses presented below to account for any potential role of gender and to provide further information about the relative inconsistencies identified in prior research.

### *Religious-Based Differences*

Although research on demographic differences in abortion support can sometimes yield inconsistent results, studies examining the impact of belief systems on abortion attitudes produce clear and consistent findings. Perhaps unsurprisingly given the salience of religion in the abortion debate (see Lewis, 2017), religiosity (variously defined) correlates negatively with support for legalized abortion in a range of countries including Latin America (Jelen et al., 2017; Ogland & Verona, 2011), New Zealand (Huang et al., 2014), Northern Ireland (Evans & Tonge, 2018), Poland (Bilewicz et al., 2017), South Africa (Mosley, Schulz, et al., 2020), Spain (Alvargonzález, 2017), the United Kingdom (Francis et al., 2019), the United States (Holman et al., 2020; Jelen, 2017; Strickler & Danigelis, 2002), Slovenia (Wall et al., 1999), and other nations (Loll & Hall, 2019; Minkenberg, 2002). Szafran and Clagett (1988) analyzed data from the first 11 years of the GSS and found that the frequency at which Catholics attended church correlated negatively with traumatic abortion support. Others also show that the frequency at which people attend religious services correlates negatively with abortion support across religions in Brazil (Ogland & Verona, 2011), Poland (Mikołajczak & Bilewicz, 2015), and the United States (Ellison et al., 2005; Gay & Lynxwiler, 1999). Finally, living in areas with high rates of religiosity fosters pro-life attitudes for both the religious and the nonreligious (Adamczyk & Valdimarsdóttir, 2018; see also Henry et al., 2022, for an examination of the negative relationship between country-level religiosity and the legality of abortion across 194 countries).

Additional work shows that religious differences in abortion support emerge when distinguishing between elective and traumatic abortion. Krishnan (1991) demonstrated that religiosity correlated negatively with support for both elective and traumatic abortion using nationally representative data from Canada (similar results emerge in the United States; e.g., see Benin, 1985; Osborne & Davies, 2012). Mikołajczak and Bilewicz (2015) also found that church attendance correlated negatively with support for both types of abortion among a sample of university students from Poland. But notably, religious-based opposition to both elective and traumatic abortion has increased in the last 40 years, especially among Evangelicals (e.g., see Hoffmann & Johnson, 2005). In short, religiosity is consistently associated with opposition to legalized abortion.

Although religion plays a key role in the abortion debate, important differences exist both within religious denominations (e.g., Catholics; see Antkowiak et al., 2021) and between religious traditions (Evans, 2002), denominational affiliations (Adamczyk, 2008), and moral beliefs (Weber & Federico, 2013). For example, Catholics are generally less supportive of abortion than are Protestants (Francis et al., 2019), Jews (Hoffmann & Miller, 1997), and the nonreligious (Alvargonzález, 2017). Yet some work reveals that conservative Protestants oppose abortion more

than do Catholics in Latin America (Jelen et al., 2017) and in the United States (Ellison et al., 2005). Student data from South Africa further shows that Muslims support elective abortion less, but traumatic abortion *more*, than do Christians (Selebalo-Bereng & Patel, 2019). And although the abortion debate often focuses on reducing harm to the unborn (e.g., pro-life advocates argue that abortion is murder), research reveals that the moral foundation of Purity, a concern with morality and the maintenance of spiritual perfection, predicts abortion opposition better than does the moral foundation of Harm (see Deak & Saroglou, 2015; Koleva et al., 2012; Lockhart et al., 2021). Collectively, this work highlights key nuances between religious affiliations and different types of religious beliefs in abortion support.

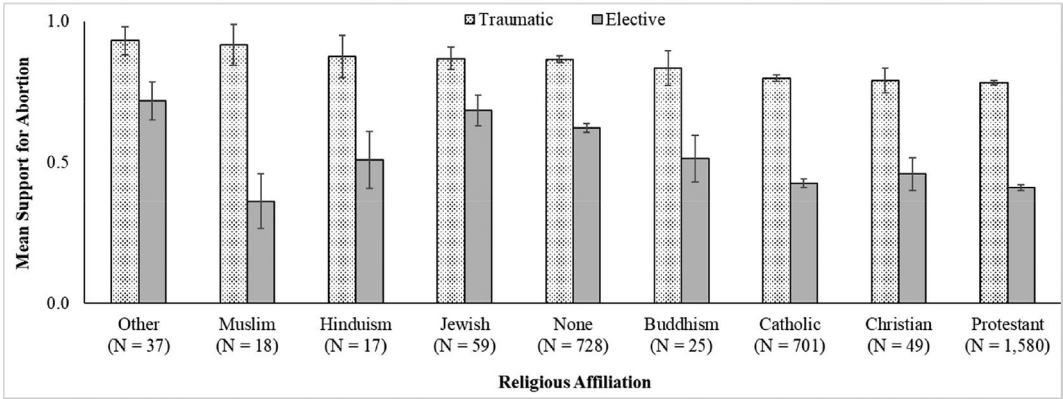
To further investigate the critical role of religion in shaping abortion attitudes, we examine differences in abortion support across religious affiliations in two distinct contexts. First, we investigate differences in the United States by pooling data from the last two waves of the GSS. Then, we use Time 10 of the NZAVS to assess differences in abortion support across religious affiliations in New Zealand. Whereas around 65% of Americans self-identify as Christian (Pew Research Center, 2019), less than half of New Zealanders do so (Hoverd et al., 2015). By assessing differences in abortion support across religious affiliations in these two distinct national contexts, we increase understanding of the similarities and differences in how different forms of religious belief influence the abortion debate.

#### *New Analyses Examining Differences in Abortion Support Across Religious Affiliations in the United States*

To investigate differences in abortion support across religious affiliations in the United States, we return to data from the GSS. Since 1972, the GSS has assessed religious affiliation by asking participants the following: “What is your religious preference? Is it Protestant, Catholic, Jewish, some other religion, or no religion?” Participants’ responses were then coded into 13 categories by the GSS. To ensure adequate sample size in the less frequent responses, we pooled data from the two most recent waves of the study (i.e., 2016 and 2018), resulting in nine affiliations with at least 15 participants: (1) Protestant, (2) Catholic, (3) Jewish, (4) None, (5) Other, (6) Buddhism, (7) Hinduism, (8) Muslim, and (9) Christian. Consistent with our prior analyses of the GSS, we calculated participants’ mean elective and traumatic abortion support. We also included participants’ (a) age, (b) ethnicity (white vs. minority), (c) gender, (d) education, and (e) political orientation as covariates to estimate the unique effects of religious affiliation on abortion support.

Figure 6 displays the estimated marginal means of a 9 (Religious Affiliation)  $\times$  2 (Abortion Type) mixed-model ANCOVA with abortion type treated as a repeated measure and (a) age, (b) ethnicity, (c) gender, (d) education, and (e) political orientation entered as covariates. After adjusting for these covariates, results revealed that participants supported traumatic abortion ( $M = 0.85$ ,  $SE = 0.02$ ) more than elective abortion ( $M = 0.52$ ,  $SE = 0.02$ ),  $F_{(1, 3200)} = 58.55$ ,  $p < .001$ ,  $\eta_p^2 = .018$ . There was also a main effect of religious affiliation indicating that abortion support varied across groups,  $F_{(8, 3200)} = 16.11$ ,  $p < .001$ ,  $\eta_p^2 = .039$ . Because this main effect was qualified by abortion type,  $F_{(8, 3200)} = 9.10$ ,  $p < .001$ ,  $\eta_p^2 = .022$ , we followed these analyses up with a MANCOVA and report the corresponding univariate ANCOVAs which adjust for our covariates.

Our first ANCOVA identified a main effect of religious affiliation on elective abortion support,  $F_{(8, 3200)} = 19.13$ ,  $p < .001$ ,  $\eta_p^2 = .046$ . After adjusting for our covariates and employing a Bonferroni correction, comparisons of the estimated marginal means displayed in Table 7 revealed that both Catholics and Protestants supported elective abortion less than did those who identified as Other, Jewish, or none ( $ps < .001$ ). Due to the conservative nature of these Bonferroni corrections and the small sample sizes for the infrequent affiliations, none of the remaining differences in elective abortion support across religious affiliations differed from zero.



**Figure 6.** Estimated marginal means of abortion support in the United States as a function of religious affiliation. Results adjust for age, ethnicity, gender, education, and political orientation. To ensure adequate sample size among smaller religious groupings, data combine the samples from the 2016 and 2018 U.S. General Social Survey ( $N = 3,351$ ). Four religious affiliations were excluded from these analyses for having too few participants (i.e.,  $N \leq 12$ ).

**Table 7.** Estimated Marginal Means of Abortion Support in the United States by Religious Affiliation

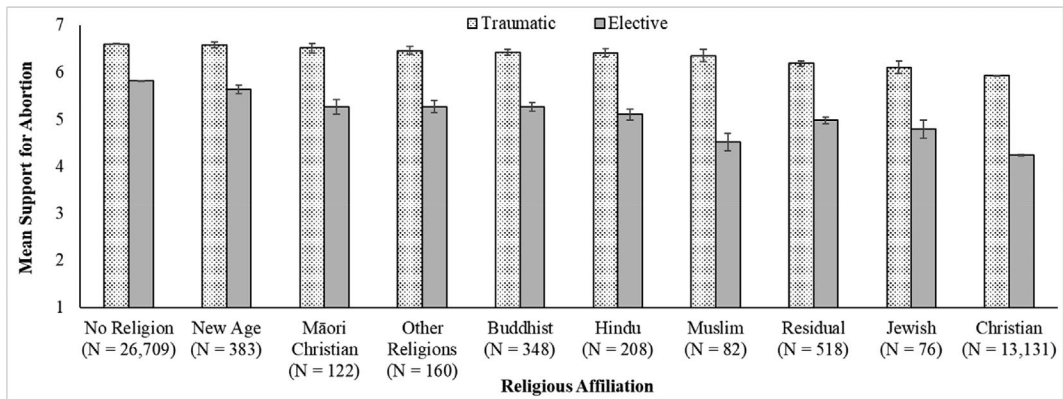
|            | Elective Abortion       |      | Traumatic Abortion      |      |
|------------|-------------------------|------|-------------------------|------|
|            | Estimated Marginal Mean | SE   | Estimated Marginal Mean | SE   |
| Other      | 0.72 <sup>a,b</sup>     | 0.07 | 0.93                    | 0.05 |
| Jewish     | 0.68 <sup>c,d</sup>     | 0.05 | 0.87                    | 0.04 |
| None       | 0.62 <sup>e,f</sup>     | 0.02 | 0.87 <sup>a,b</sup>     | 0.01 |
| Hindu      | 0.51                    | 0.10 | 0.88                    | 0.08 |
| Buddhist   | 0.51                    | 0.08 | 0.83                    | 0.06 |
| Christian  | 0.46                    | 0.06 | 0.79                    | 0.04 |
| Catholic   | 0.43 <sup>a,c,e</sup>   | 0.02 | 0.80 <sup>a</sup>       | 0.01 |
| Protestant | 0.41 <sup>b,d,f</sup>   | 0.01 | 0.78 <sup>b</sup>       | 0.01 |
| Muslim     | 0.36                    | 0.10 | 0.92                    | 0.07 |

*Note.* Estimated marginal means that share a superscript within the same column significantly differ from each other ( $p \leq .05$ ). Results adjust for age, ethnicity, gender, education, and political orientation. Bonferroni corrections adjust for multiple comparisons. Data combine samples from the 2016 and 2018 U.S. General Social Survey ( $N = 3,351$ ).

Our second ANCOVA also identified a main effect of religious affiliation on traumatic abortion support,  $F_{(8, 3200)} = 5.43, p < .001, \eta_p^2 = .013$ . After adjusting for our covariates and applying a Bonferroni correction, comparisons of the estimated marginal means revealed that Catholics ( $p < .001$ ) and Protestants ( $p < .001$ ) supported traumatic abortion less than did participants with no religious affiliation (see Table 7). Once again, due to the conservative nature of these Bonferroni corrections and the small sample sizes in some of the less frequently mentioned religious groups, none of the remaining differences between religious groups in traumatic abortion support differed significantly from zero.

*New Analyses Examining Differences in Abortion Support Across Religious Affiliations in New Zealand*

To compliment and extend these analyses in a distinct national context (namely, New Zealand), we examine data from Time 10 of the NZAVS. We rely on the Time 10 dataset for these analyses because it provides the largest sample size to date and, thus, allows us to detect mean level differences in abortion support across even relatively small religious groupings. These new analyses include the



**Figure 7.** Estimated marginal means of abortion support in New Zealand as a function of religious affiliation. Results adjust for age, ethnicity, gender, education, and political orientation. Data are derived from Time 10 of the New Zealand Attitudes and Values Study and are based on the 41,737 participants who reported their religious affiliation, elective and traumatic abortion support, and covariates.

41,737 participants who reported their religious affiliation, elective and traumatic abortion support, and covariates. Religious affiliation was assessed by asking: “Do you identify with a religion and/or spiritual group”? Participants who responded affirmatively were then asked to report the religion or spiritual group with which they identified, with responses coded into the following 10 categories defined by the New Zealand Census: (1) no religion, (2) Buddhist, (3) Christian, (4) Hindu, (5) Islam/Muslim, (6) Judaism, (7) Māori Christian, (8) New Age, (9) Other Religions, and (10) residual affiliations. Finally, to estimate the unique effects of religious affiliation on abortion support, we included participants’ (a) age, (b) ethnicity (New Zealand European vs. ethnic minority), (c) gender, (d) education, and (e) political orientation as covariates.

Figure 7 displays the estimated marginal means of a 10 (Religious Affiliation) × 2 (Abortion Type) mixed model ANCOVA with abortion type treated as a repeated measure and (a) age, (b) ethnicity, (c) gender, (d) education, and (e) political orientation entered as covariates. After adjusting for these covariates, results revealed that participants supported traumatic abortion ( $M = 6.36, SE = 0.03$ ) more than elective abortion ( $M = 5.09, SE = 0.04$ ),  $F_{(1, 41722)} = 5.09, p = .024, \eta_p^2 = .000$ . There was also a main effect of religious affiliation indicating that support for abortion varied across religious groups,  $F_{(9, 41722)} = 757.35, p < .001, \eta_p^2 = .140$ . Because this main effect was qualified by abortion type,  $F_{(9, 41722)} = 292.99, p < .001, \eta_p^2 = .059$ , we followed these analyses up with a MANCOVA and report the corresponding univariate ANCOVAs which adjust for our covariates.

Our first ANCOVA identified a main effect of religious affiliation on elective abortion support,  $F_{(9, 41722)} = 776.28, p < .001, \eta_p^2 = .143$ . After adjusting for our covariates and applying a Bonferroni correction, comparisons of the estimated marginal means revealed that participants who identified as Christian were the least supportive of elective abortion (see Table 8), whereas those who identified with either no religion or a new age religion were the most supportive of elective abortion. Participants who identified with the remaining religious groups supported elective abortion to varying degrees.

Our second ANCOVA also identified a main effect of religious affiliation on traumatic abortion support,  $F_{(9, 41722)} = 299.31, p < .001, \eta_p^2 = .06$ . After adjusting for our covariates and applying a Bonferroni correction, comparisons of the estimated marginal means revealed that participants who identified as Christian were the least supportive of traumatic abortion (see Table 8). Conversely, those who identified with either no religion or a new age religion expressed the most support for

**Table 8.** Estimated Marginal Means of Abortion Support in New Zealand by Religious Affiliation

|                 | Elective Abortion               |      | Traumatic Abortion              |      |
|-----------------|---------------------------------|------|---------------------------------|------|
|                 | Estimated Marginal Mean         | SE   | Estimated Marginal Mean         | SE   |
| No religion     | 5.82 <sup>a,b,c,d,e,f,g,h</sup> | 0.01 | 6.60 <sup>a,b,c</sup>           | 0.01 |
| New age         | 5.64 <sup>ij,k,l,m</sup>        | 0.09 | 6.57 <sup>d,e</sup>             | 0.06 |
| Other religions | 5.27 <sup>a,n</sup>             | 0.13 | 6.46 <sup>f</sup>               | 0.09 |
| Buddhist        | 5.27 <sup>b,o,p</sup>           | 0.09 | 6.43 <sup>g</sup>               | 0.06 |
| Māori Christian | 5.26 <sup>c,q</sup>             | 0.15 | 6.51 <sup>h</sup>               | 0.11 |
| Hindu           | 5.10 <sup>d,i,r</sup>           | 0.12 | 6.42 <sup>i</sup>               | 0.08 |
| Residual        | 4.98 <sup>e,j,s</sup>           | 0.07 | 6.19 <sup>a,d,j</sup>           | 0.05 |
| Jewish          | 4.79 <sup>f,k</sup>             | 0.19 | 6.11 <sup>b</sup>               | 0.13 |
| Muslim          | 4.53 <sup>g,l,o</sup>           | 0.19 | 6.35 <sup>k</sup>               | 0.13 |
| Christian       | 4.25 <sup>h,m,n,p,q,r,s</sup>   | 0.02 | 5.92 <sup>c,e,f,g,h,i,j,k</sup> | 0.01 |

*Note.* Estimated marginal means that share a superscript within the same column significantly differ from each other ( $p \leq .05$ ). Results adjust for age, ethnicity, gender, education, and political orientation. Bonferroni corrections adjust for multiple comparisons. Data are derived from Time 10 of the New Zealand Attitudes and Values Study ( $N = 41,737$ ).

traumatic abortion (although they only differed significantly from three and two groups, respectively). Participants who identified with the remaining religious groupings tended to express comparable levels of support for traumatic abortion.

Keeping in mind that the prior analyses utilize different measures of abortion support and use slightly different groupings of religious affiliation, some similarities and differences across countries merit discussion. First, traumatic abortion support was once again higher than elective abortion support in both the United States and New Zealand. Second, abortion support varied—often widely—across religious affiliations. Third, although the relative rankings differed across countries, Christians consistently expressed less support for both traumatic and elective abortion than did participants who identified with Eastern or new age religions. And interestingly, in both samples, Muslims expressed considerably more support for traumatic abortion than they did for elective abortion. Indeed, Muslims were some of the most ardent supporters of traumatic abortion in the United States yet expressed the most opposition to elective abortion. Together, these results illustrate the nuanced associations between distinct religious affiliations and abortion attitudes, while also highlighting the need to account for the unique cultural context in which these views emerge.

#### *New Analyses Examining the Impact of Intimate Partners' Religiosity on Abortion Attitudes*

Our review and the new data we have presented illustrate the nuanced effects of various religious beliefs on abortion support. That said, research has yet to examine how abortion attitudes are shaped by close *others'* religious beliefs. This is an important gap because one's personal views on a topic are likely impacted by how close others (and particularly those with whom one might have children) evaluate the issue. Indeed, people often “tune” their attitudes to be consistent with close others (Hardin & Higgins, 1996). For example, longitudinal data revealed that women from conservative families who attended Bennington College (i.e., a liberal arts school in the Northeast of the United States) became more liberal during their time at university (Newcomb, 1965). Yet women who married conservative men after graduating eventually reverted back to their conservative beliefs (Alwin et al., 1991). Most relevant to the current discussion, Adamczyk and Valdimarsdóttir (2018) found that county-wide levels of religiosity correlate negatively with both religious and secular participants' abortion support. Collectively, these data

suggest that the views of (close) others can affect people's sociopolitical views (including their abortion support). The extent to which these processes occur within intimate couples, however, has yet to be established.

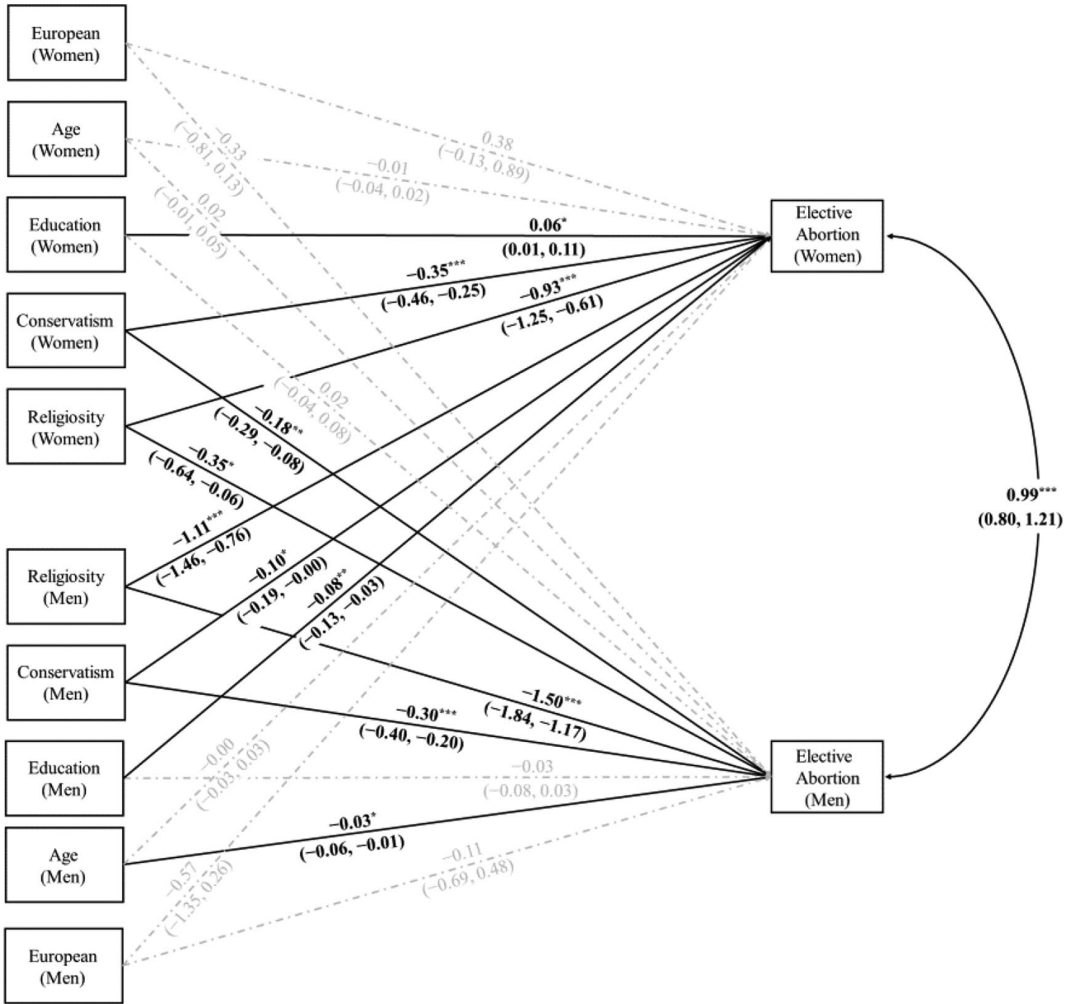
We present the first investigation of whether people's abortion support is influenced by close others' attitudes by examining data from heterosexual romantic couples drawn from Time 11 of the NZAVS. We utilize data from Time 11 because it contains the largest sample of couples in the NZAVS to date. Although the NZAVS primarily samples individuals, some participants' partners have joined the study over time through random sampling or via self-selection. Because couple members joined the study at separate time points, we developed strict criteria to identify cohabiting couples who, by happenstance, were in our dataset. First, we identified all participants in our dataset who shared a postal address.<sup>4</sup> Of the potential couples who met this criterion, both couple members had to also meet one or more of the following criteria to be classified as a couple: (1) Both couple members had to report the same relationship type and similar relationship duration, (2) if both couple members said they were married, then they also had to report the same marriage date, and (3) both partners' genders needed to be consistent with both couple members' reported sexual orientation. To ensure that we did not misclassify parent-adult child dyads as couples, potential matches with more than 12 years difference in age also had to meet at least one of two additional criteria: (1) Both couple members had to report the same date of marriage and (2) if parents, both couple members had to report the same birthdate of one or more children (for more info, see Lee et al., 2020). Based on these inclusion criteria, we identified 697 unique heterosexual couples who completed measures of religiosity (0 = no, 1 = yes) and support for elective and traumatic abortion, as well as key covariates (namely, ethnicity, age, educational status, and political orientation).

To assess the effects of men's and women's religiosity on their romantic partner's abortion attitudes, we estimated an Actor-Partner Interdependence Model (APIM; Cook & Kenny, 2005; Kenny et al., 2006). An APIM estimates both actor effects (e.g., the association between women's religiosity and their own elective abortion support) and partner effects (e.g., the association between women's religiosity and their male partner's elective abortion support) *after* adjusting for similarities between romantic partners' religiosity and attitudes toward abortion (i.e., the covariances between variables), as well as key covariates among both actors and partners. In the same model, women's and men's support for elective and traumatic abortion were regressed onto their own religiosity (actor effects) and their partner's religiosity (partner effects). Although we estimated a single model that simultaneously predicted elective and traumatic abortion support, we present the results in separate figures to ensure the readability of the results.

The results displayed in Figure 8a reveal actor effects on both women's and men's elective abortion support. Women's education correlated positively ( $p = .03$ ), whereas their conservatism and religiosity correlated negatively ( $ps < .001$ ), with their own support for elective abortion. Additionally, men's age ( $p = .013$ ), conservatism ( $p < .001$ ), and religiosity ( $p < .001$ ) correlated negatively with their own elective abortion support. Thus, both women and men who identified as religious expressed less support for elective abortion than did their counterparts who did not identify as religious (after adjusting for the other variables in the model).

Figure 8a also displays partner effects on women's and men's elective abortion support. Men's education ( $p = .003$ ), conservatism ( $p = .03$ ), and religiosity ( $p < .001$ ) correlated negatively with their romantic partner's elective abortion support. Likewise, women's conservatism ( $p = .001$ ) and religiosity ( $p < .001$ ) correlated negatively with their romantic partners' elective abortion support. Thus, after adjusting for their own religiosity and key covariates, women and men whose intimate

<sup>4</sup>In cases where one person provided a residential address and the other provided a postal box in the same region, we identified couples who shared a landline or email address.

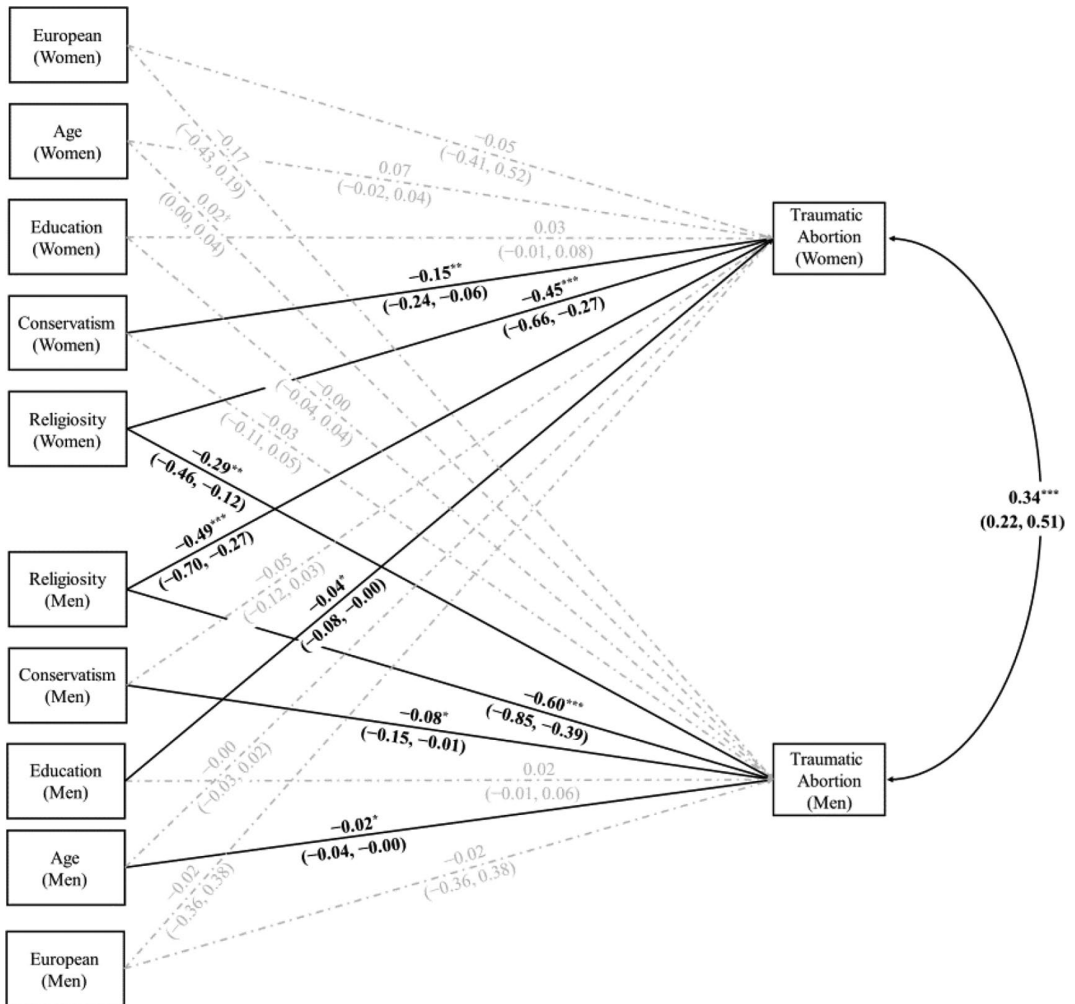


**Figure 8a.** Actor-Partner Independence Model examining the relationship between religiosity and elective abortion support among heterosexual couples ( $N = 697$  couples) in New Zealand. The model predicting support for traumatic abortion was estimated simultaneously but is shown separately in Figure 8b to increase clarity. Values reflect unstandardized regression coefficients (with bias corrected 95% confidence intervals estimated via 5,000 bootstrapped resamples in parentheses). Data are derived from Time 11 of the New Zealand Attitudes and Values Study and include all participants who provided partial or complete responses to our variables of interest. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

partners identified as religious were less supportive of elective abortion than were their counterparts whose partners did not identify as religious.

Figure 8b displays the actor effects of our predictors on women’s and men’s support for traumatic abortion. Women’s conservatism ( $p = .001$ ) and religiosity ( $p < .001$ ) correlated negatively with their own traumatic abortion support. Men’s age ( $p = .03$ ), conservatism ( $p = .02$ ), and religiosity ( $p = .001$ ) also correlated negatively with their own traumatic abortion support. Thus, after adjusting for the covariates in the model (as well as the partner effects), women and men who identified as religious were less supportive of traumatic abortion than were those who did not identify as religious.

Figure 8b also displays the effects of partners’ beliefs on traumatic abortion support. As shown here, only women’s religiosity predicted their male romantic partners’ support for traumatic abortion:



**Figure 8b.** Actor-Partner Independence Model examining the relationship between religiosity and traumatic abortion support among heterosexual couples ( $N = 697$  couples) in New Zealand. The model predicting support for elective abortion was estimated simultaneously but is shown separately in Figure 8a to increase clarity. Values reflect unstandardized regression coefficients (with bias corrected 95% confidence intervals estimated via 5,000 bootstrapped resamples in parentheses). Data are derived from Time 11 of the NZAVS and include all participants who provided partial or complete responses to our variables of interest. † $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Women who identified as religious had romantic partners who were less supportive of traumatic abortion than did women who did not identify as religious ( $p = .001$ ). Additionally, men’s level of education ( $p = .03$ ) and religiosity ( $p < .001$ ) correlated negatively with their partners’ support for traumatic abortion. Thus, after adjusting for their own religiosity and key covariates, women and men whose intimate partners identified as religious were less supportive of traumatic abortion than were their counterparts whose partners did not identify as religious.

These analyses provide the first evidence that women’s and men’s abortion support is influenced not only by their own religiosity but also by whether their intimate partners identify as religious. Notably, these results emerged after adjusting for the ethnicity, age, education, and political ideology of both participants and their intimate partners, as well as their own religiosity. These results demonstrate that the religious beliefs of one’s romantic partner can independently influence one’s



own abortion support. Future research should investigate the generalizability of these results by examining these processes in same-sex and non-cis-gendered couples.

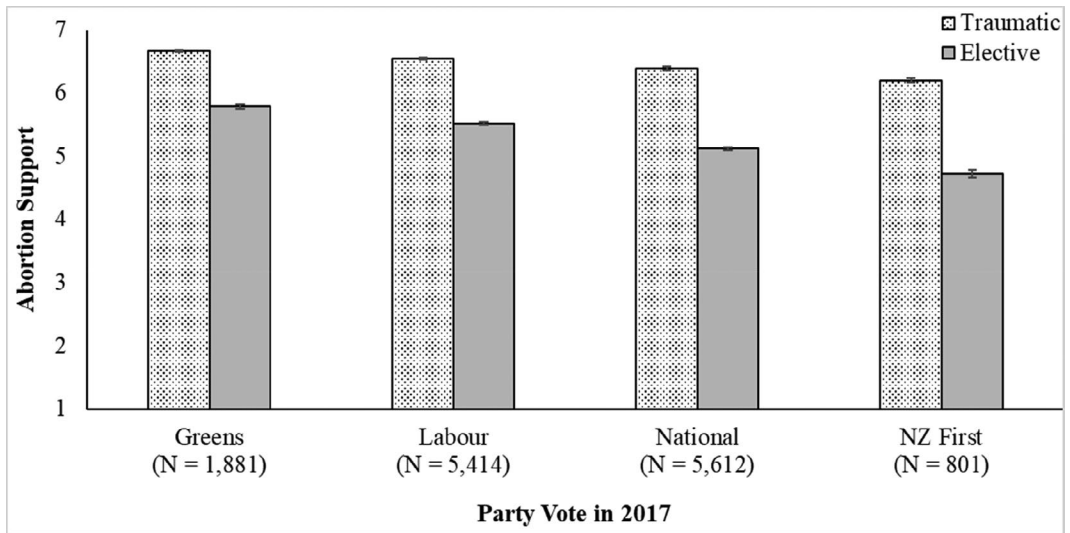
### *Partisan Differences*

In the previous section, our integrative review and new analyses showed that religious beliefs can decrease people's abortion support even if those beliefs are held by (close) others. But other belief systems may also impact one's stance in the abortion debate. Unsurprisingly given the centrality of women's reproductive rights to both the culture war (Jelen et al., 2017; Lewis, 2017; Mouw & Sobel, 2001) and the wave of political polarization currently unfolding in the United States (DiMaggio et al., 1996; Hare & Poole, 2014; Layman et al., 2010), research reveals that political ideology consistently correlates with abortion attitudes (Hout, 1999; Osborne & Davies, 2012; Prusaczyk & Hodson, 2018; Zucker, 1999). Conservatives and those who identify with right-wing political parties express less support for abortion than do their liberal and left-wing counterparts (Cook et al., 1992; Hess & Rueb, 2005; Strickler & Danigelis, 2002; Yen & Zampelli, 2017). Notably, these patterns emerge in various countries including Brazil (Ogland & Verona, 2011), New Zealand (Huang et al., 2016), Poland (Bilewicz et al., 2017; Jelen & Wilcox, 1997), and the United States (Adams, 1997; Sahar & Karasawa, 2005). Although some data suggest that both Democrats and Republicans are becoming more supportive of women's reproductive rights (Jelen, 2017), abortion remains a cornerstone issue in the culture war (see Koleva et al., 2012; Oldmixon, 2002). In fact, abortion attitudes can be more impactful than economic conditions on vote choice (Cook et al., 1994) and contribute to partisan sorting in which pro-life Democrats and pro-choice Republicans switch to parties that match their views on abortion (Carsey & Layman, 2006; Killian & Wilcox, 2008). Yet few studies have examined partisan differences in abortion support in multiparty systems where abortion support may be less consistently associated with left-wing political parties.

#### *New Analyses of Partisan Differences in Abortion Support in New Zealand*

To address this oversight and increase understanding of partisan differences in abortion support in a multiparty context, we conducted new analyses of data from New Zealand using Time 9 of the NZAVS (August 2017–June 2018). We focused on this wave of the NZAVS because it immediately followed the 2017 General Election in New Zealand. As a multiparty system, New Zealand offers an interesting test of the association between partisanship and abortion attitudes. For one, as noted above, abortion has been a mostly nonpartisan issue in New Zealand. Up until the 2017 election, the main center-left party (namely, Labour) and the main center-right party (namely, National) had largely refrained from incorporating abortion into their official party platforms since it was made illegal and added to the Crimes Act in 1961.<sup>5</sup> But in 2017, Jacinda Ardern, the then-opposition leader of the main center-left Labour Party, pledged to remove abortion from the Crimes Act. Bill English, the then-leader of the main center-right National Party and sitting Prime Minister at the time, opposed the move, seeking rather to leave the legislation unchanged. After the Labour Party's victory in 2017, the newly appointed Prime Minister Ardern and her cabinet introduced legislation to remove

<sup>5</sup>Under the Crimes Act, abortions were classified as a criminal offence in New Zealand. Exceptions were made for instances where two medical professionals agreed that carrying the pregnancy to term would undermine the woman's physical or mental health. Although this legalized abortion in practice, it created numerous obstacles for women seeking to terminate their pregnancy *particularly* for those living in rural communities without close access to multiple medical professionals (Silva & McNeill, 2008).



**Figure 9.** Estimated marginal means of abortion support in New Zealand as a function of self-reported party vote in the 2017 General Election. Analyses adjust for participants' age, ethnicity, gender, religiosity, and education. Analyses are also restricted to the four political parties who reached the 5% threshold for representation in Parliament. Data are derived from Time 9 of the New Zealand Attitudes and Values Study ( $N = 13,708$ ).

abortion from the Crimes Act, which was passed in 2020.<sup>6</sup> Our analyses thus focus on a unique time in New Zealand politics and can increase understanding of how elite party cues influence public opinion within a multiparty context.

Although 16 parties ran candidates in the 2017 Election, we focus on the 13,708 participants who responded to our variables of interest and who voted for the four political parties that reached the party-vote threshold for representation in Parliament by receiving 5% or more of the popular vote.<sup>7</sup> Our selection criteria left these four parties: (1) the Green Party, (2) the center-left Labour Party, (3) the center-right National Party, and (4) New Zealand First. Whereas the Green Party appeals to socially progressive voters concerned with climate change and the environment, New Zealand First communicates a nationalistic and populist agenda that appeals to those of lower socioeconomic status (see Satherley et al., 2020). Thus, these new analyses examine differences in abortion support across supporters of the two left- and right-leaning major parties (i.e., the Labour Party and the National Party, respectively), as well as the two most popular progressive and conservative minor parties (i.e., the Green Party and New Zealand First, respectively).

To examine differences in abortion support across party vote in the 2017 election, we conducted a 4 (Party Vote)  $\times$  2 (Abortion Type) mixed model ANCOVA with abortion type as a repeated measure and (a) age, (b) ethnicity, (c) gender, (d) education, and (e) religiosity used as covariates. Figure 9 displays the estimated marginal means of abortion support after adjusting for our covariates. Results revealed a main effect of abortion type such that participants expressed more support for traumatic abortion ( $M = 6.45$ ,  $SE = 0.01$ ) than for elective abortion ( $M = 5.29$ ,  $SE = 0.02$ ;  $F_{(1,$

<sup>6</sup>Abortions are now available without restrictions to women in New Zealand who are fewer than 20 weeks pregnant. Women who are more than 20 weeks pregnant still require an assessment from a qualified health professional when seeking an abortion.

<sup>7</sup>In New Zealand, representation in Parliament can also be achieved by a candidate winning an electorate. But because these instances often reflect the popularity of a candidate in a specific local context, we focus on party vote here instead because it (a) arguably captures the national sentiment and (b) avoids tapping into participants' assessment of specific candidates' personalities.

$_{13699}) = 6.88, p = .009, \eta_p^2 = .001$ ). There was also a main effect of party vote indicating that abortion support varied by party vote,  $F_{(3, 13699)} = 122.23, p < .001, \eta_p^2 = .026$ . Because this main effect was qualified by an interaction with abortion type,  $F_{(3, 13699)} = 51.29, p < .001, \eta_p^2 = .011$ , we followed these analyses up with a MANCOVA and report the corresponding univariate ANCOVAs which adjust for our five covariates.

The results from our first ANCOVA revealed a main effect of party vote on elective abortion support,  $F_{(2, 13699)} = 122.72, p < .001, \eta_p^2 = .026$ . After adjusting for our covariates and applying a Bonferroni correction, comparisons of the estimated marginal means revealed that Green Party voters supported elective abortion more than did Labour Party voters ( $p < .001$ ), who supported elective abortion more than did National Party voters ( $p < .001$ ). In turn, National Party voters supported elective abortion more than did New Zealand First voters ( $p < .001$ ).

The second ANCOVA also revealed a main effect of party vote on traumatic abortion support,  $F_{(2, 13699)} = 52.49, p < .001, \eta_p^2 = .011$ . After adjusting for our covariates and using a Bonferroni correction, comparisons of the estimated marginal means revealed that supporters of the far-left Green Party supported traumatic abortion more than did Labour Party voters ( $p < .001$ ), who supported traumatic abortion more than did National Party voters ( $p < .001$ ). National Party voters, in turn, supported traumatic abortion more than did New Zealand First voters ( $p < .001$ ). Thus, these results both (a) reveal clear partisan differences in which liberal party voters support both types of abortion more than do conservative party voters and (b) extend past research by corroborating partisan effects in an understudied—and less polarized (see Satherley et al., 2020)—multiparty context.

### *Personality-Based Differences*

The previous sections have reviewed research and presented new data documenting demographic and ideological correlates of abortion support. Yet few—if any—studies have examined the possibility that personality traits uniquely predict abortion attitudes. There are, however, a few reasons to expect that personality will correlate with abortion support. First, personality factors correlate consistently with a range of political preferences (for a thorough review, see Federico, 2022). In particular, Openness to Experience—a trait indexing people's preferences for novelty and culturally diverse experiences—correlates negatively with conservative policy positions on a range of issues including LGBT rights (Osborne & Sibley, 2015), resource redistribution (Johnston et al., 2017), and minority rights (Ziller & Berning, 2021), as well as conservative party choice (Chirumbolo & Leone, 2010; Osborne & Sibley, 2012; Rentfrow et al., 2009) and conservative ideological identification (Osborne et al., 2021; Osborne & Sibley, 2020; Roets et al., 2014; Sibley et al., 2012). This is because acceptance of inequality and support for the status quo, the two core dimensions of conservatism (see Jost, 2006), conflict with the culturally diverse and novel experiences sought out by those high in Openness to Experience. Consistent with this thesis, a recent meta-analysis of data from 232 unique samples ( $N = 575,691$ ) across 70 separate nations reveals that Openness to Experience is by far the strongest correlate of conservatism among the Big Five personality traits (Osborne et al., 2021). Given that abortion is a core issue dividing the political left from the right, Openness to Experience should also correlate positively with support for both types of abortion.

### *New Analyses Examining Personality Correlates of Abortion Support*

To investigate potential personality correlates of abortion support and, thus, increase understanding of how predispositions influence one's position on the abortion debate, we estimated two separate regression models using data from Time 10 of the NZAVS ( $N = 39,471$ ). We once again used data from Time 10 because it has the largest sample size to date and can therefore provide the

most precise estimates available of the relationships between personality and abortion support in New Zealand. In Model 1, we used the Big Six—an influential personality framework that incorporates Honesty-Humility into the commonly used Big Five personality model (e.g., see Ashton & Lee, 2007, 2009)—to predict elective and traumatic abortion support. To see if personality *uniquely* predicts abortion support, we added the following covariates to Model 2: (a) employment status (0 = *unemployed*, 1 = *employed*), (b) minority status (0 = *ethnic majority*, 1 = *ethnic minority*), (c) gender (0 = *woman*, 1 = *man*), (d) religiosity (0 = *nonreligious*, 1 = *religious*), (e) parental status (0 = *nonparent*, 1 = *parent*), (f) age, (g) education, (h) household income, and (i) conservatism. In both models, we simultaneously regressed elective and traumatic abortion support onto our predictor variables. To identify the precision of these estimates, bias corrected (BC) 95% CIs were calculated based on 5,000 bootstrapped resamples (with replacement).

Table 9 displays the results of these analyses. The first thing to note from Model 1 is that personality predicts attitudes toward elective abortion better than it does attitudes toward traumatic abortion. Examination of the  $R^2$ s for both variables reveals that personality explains 1.9% of the variance in elective abortion support and 1.1% of the variance traumatic abortion support. In this sense, personality plays a small *direct* role in explaining attitudes toward both types of abortion. With this note in mind, the associations between Openness to Experience and support for both types of abortion were roughly three or more times stronger than the other associations between personality traits and abortion support.

Table 9 also displays the results including our covariates. Consistent with the broader literature on abortion attitudes and our own analyses presented above, participants who identified (a) as religious, (b) with a minority group, and (c) as a parent were less supportive of both elective and traumatic abortion than were their respective nonreligious, ethnic majority, and nonparent counterparts. In contrast, being employed and one's level of education correlated positively with support for both types of abortion. After adjusting for the other variables in the model, age correlated negatively with elective abortion support, but positively with traumatic abortion support. Men also expressed less support for both elective and traumatic abortion than did women, which contrasts with prior work indicating that men sometimes express more support than do women (Huang et al., 2014; Jelen et al., 2002). This once again illustrates that gender differences in abortion support are often inconsistent across studies. But notably, apart from religiosity, conservatism was by far the strongest (negative) correlate of elective and traumatic abortion support. Openness to Experience continued to correlate positively with support for both types of abortion after adjusting for the covariates in Model 2.

To examine the possibility that personality predicts attitudes toward abortion through political ideology, we estimated a final regression model in which Openness to Experience had indirect effects on support for elective and traumatic abortion through conservatism. We regressed both abortion attitudes onto conservatism, the Big Six, and the remaining predictors in our model, and, in turn, regressed conservatism onto the Big Six and our demographic covariates. Once again, BC 95% CIs were estimated using 5,000 bootstrapped resamples (with replacement).

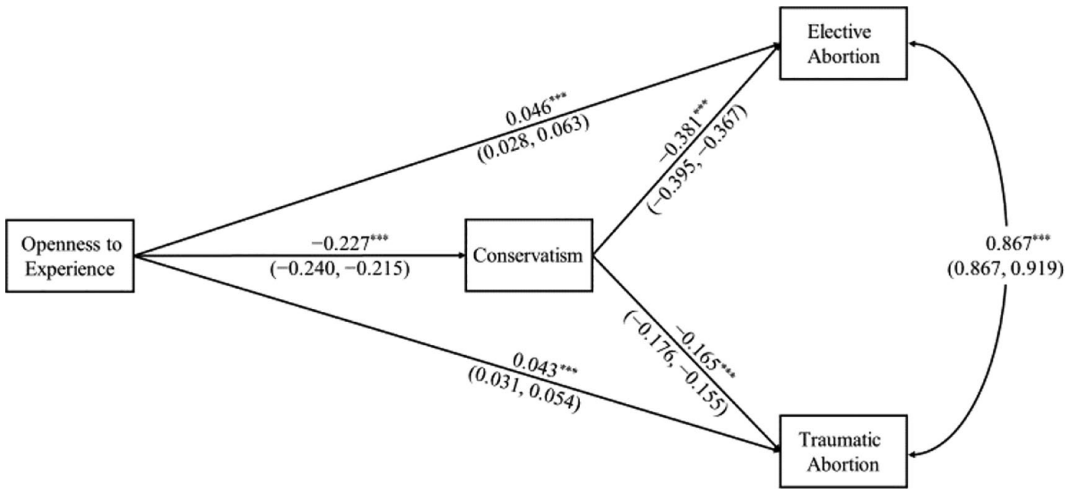
Figure 10 displays the results of this mediational model. As shown here and consistent with the broader literature on the personality correlates of political conservatism (Osborne et al., 2021), Openness to Experience correlated negatively with conservatism after adjusting for our demographic covariates and the remaining Big Six personality dimensions. In turn, conservatism correlated negatively with support for both types of abortion. Mediational analyses confirmed that the indirect effects of Openness to Experience on abortion support through conservatism were significant for both elective abortion ( $B_{Indirect} = 0.087$ , BC 95% CI [0.081, 0.093];  $p < .001$ ) and traumatic abortion ( $B_{Indirect} = 0.038$ , BC 95% CI [0.035, 0.041];  $p < .001$ ). Although there are questions about whether personality *precedes* conservatism (Osborne & Sibley, 2020; Verhulst et al., 2012), these results suggest that conservatism (partially) mediates the associations between Openness to Experience and attitudes toward elective and traumatic abortion.

**Table 9.** Demographic and Personality Predictors of Support for Elective and Traumatic Abortion

|                                     | Elective Abortion |      |        |                  | Traumatic Abortion |      |        |                  |
|-------------------------------------|-------------------|------|--------|------------------|--------------------|------|--------|------------------|
|                                     | $\beta$           | SE   | b      | CI [95%]         | $\beta$            | SE   | b      | CI [95%]         |
| <b>Model 1 (without covariates)</b> |                   |      |        |                  |                    |      |        |                  |
| Intercept                           | –                 | –    | 4.266  | [4.065, 4.463]   | –                  | –    | 5.750  | [5.623, 5.875]   |
| Honesty-Humility                    | -.021**           | .005 | -0.035 | [-0.053, -0.017] | .006               | .006 | 0.007  | [-0.005, 0.019]  |
| Emotionality                        | .043***           | .005 | 0.074  | [0.056, 0.092]   | .009†              | .005 | 0.010  | [0.000, 0.021]   |
| Extraversion                        | .031***           | .005 | 0.052  | [0.035, 0.070]   | .007               | .005 | 0.008  | [-0.003, 0.018]  |
| Agreeableness                       | -.006             | .006 | -0.011 | [-0.033, 0.011]  | .011*              | .005 | 0.014  | [0.000, 0.028]   |
| Conscientiousness                   | -.023***          | .005 | -0.044 | [-0.063, -0.025] | -.013*             | .005 | -0.016 | [-0.028, -0.004] |
| Openness to Experience              | .120***           | .005 | 0.212  | [0.194, 0.231]   | .097***            | .005 | 0.108  | [0.096, 0.119]   |
| <b>Model 2 (with covariates)</b>    |                   |      |        |                  |                    |      |        |                  |
| Intercept                           | –                 | –    | 7.330  | [7.116, 7.541]   | –                  | –    | 6.554  | [6.403, 6.708]   |
| <b>Personality</b>                  |                   |      |        |                  |                    |      |        |                  |
| Honesty-Humility                    | -.043***          | .005 | -0.072 | [-0.088, -0.056] | -.021***           | .005 | -0.023 | [-0.034, -0.011] |
| Emotionality                        | .002              | .005 | 0.004  | [-0.012, 0.019]  | .003               | .005 | 0.003  | [-0.007, 0.013]  |
| Extraversion                        | .024***           | .005 | 0.039  | [0.024, 0.054]   | .002               | .005 | 0.003  | [-0.008, 0.013]  |
| Agreeableness                       | -.013*            | .005 | -0.025 | [-0.045, -0.006] | .012*              | .006 | 0.015  | [0.001, 0.028]   |
| Conscientiousness                   | .018***           | .005 | 0.035  | [0.019, 0.051]   | .014**             | .005 | 0.016  | [0.004, 0.028]   |
| Openness to Experience              | .026***           | .005 | 0.046  | [0.030, 0.063]   | .039***            | .005 | 0.043  | [0.031, 0.055]   |
| <b>Demographics</b>                 |                   |      |        |                  |                    |      |        |                  |
| Employed                            | .019***           | .005 | 0.093  | [0.047, 0.141]   | .017**             | .005 | 0.053  | [0.020, 0.087]   |
| Minority                            | -.051***          | .005 | -0.274 | [-0.324, -0.226] | -.053***           | .005 | -0.180 | [-0.217, -0.143] |
| Men                                 | -.067***          | .005 | -0.273 | [-0.311, -0.236] | -.025***           | .005 | -0.064 | [-0.090, -0.038] |
| Religiosity                         | -.349***          | .005 | -1.434 | [-1.476, -1.394] | -.235***           | .005 | -0.607 | [-0.635, -0.580] |
| Parent                              | -.047***          | .005 | -0.207 | [-0.248, -0.166] | -.027***           | .005 | -0.074 | [-0.101, -0.046] |
| Age                                 | -.025***          | .005 | -0.004 | [-0.005, -0.002] | .069***            | .006 | 0.006  | [0.005, 0.007]   |
| Education                           | .014**            | .005 | 0.010  | [0.003, 0.017]   | .012*              | .005 | 0.005  | [0.001, 0.010]   |
| Income                              | .064***           | .005 | 0.013  | [0.011, 0.015]   | .059***            | .005 | 0.008  | [0.006, 0.009]   |
| Conservatism                        | -.267***          | .005 | -0.381 | [-0.395, -0.366] | -.184***           | .006 | -0.165 | [-0.176, -0.155] |

Note. Data are derived from Time 10 of the New Zealand Attitudes and Values Study and include all participants who provided partial or complete responses to our variables of interest (N = 39,471). Income was divided by \$10,000 (NZD).

†  $p < .10$   
 \*  $p < .05$   
 \*\*  $p < .01$   
 \*\*\*  $p < .001$ .



**Figure 10.** Direct and indirect effects of Openness to Experience on support for elective and traumatic abortion via conservatism in New Zealand. Results adjust for the effects of employment status, minority status, gender, religiosity, parental status, age, education, income, and the remaining Big Six personality traits on conservatism and support for both types of abortion. Values reflect unstandardized regression coefficients (with bias corrected 95% confidence intervals in parentheses). Data are derived from Time 10 of the New Zealand Attitudes and Values Study and include all participants who provided partial or complete responses to our variables of interest ( $N = 39,636$ ). \*\*\* $p < .001$ .

*Summing It Up: New Analyses Predicting Latent Class Membership*

The empirical review and new analyses presented above reveal several demographic and ideological correlates of abortion support. First, younger cohorts tend to support elective and traumatic abortion more than do older cohorts. Second, despite being a cornerstone issue in the women’s rights movement, gender inconsistently correlates with abortion support (see also Bilewicz et al., 2017; Misra & Panigrahi, 1998; Strickler & Danigelis, 2002; Zucker, 1999). By contrast, ideological variables including religiosity (Adamczyk & Valdimarsdóttir, 2018; Jelen et al., 2017; Loll & Hall, 2019) and political conservatism (Carsey & Layman, 2006; Osborne & Davies, 2012; Prusaczyk & Hodson, 2018; Yen & Zampelli, 2017) reliably predict abortion attitudes. Third, the negative association between conservatism and abortion support appears to be partly rooted in personality as shown by new analyses illustrating that Openness to Experience has an indirect effect on elective and traumatic abortion support via decreases in conservatism.

Although our integration of new analyses with prior research increases understanding of the correlates of abortion support, the latent class analysis presented in our opening section identified four unique response patterns underlying abortion attitudes: (1) *Pro-choice* (those who consistently supported a woman’s right to choose), (2) *Conditional (Pro-life)*; those who opposed abortion, except for traumatic reasons), (3) *Conditional (Pro-choice)*; those who were pro-choice, albeit with reservations over some elective reasons), and (4) *Pro-life* (those who consistently opposed abortion). Yet no research to date has examined the demographic and ideological correlates of these distinct response profiles. Accordingly, we return to the GSS to provide an integrative assessment of the predictors of latent class membership. Apart from personality (which our analyses showed was mostly confined to an indirect effect on abortion support through conservatism), the 2018 GSS included all the variables noted above and can thus provide a comprehensive overview of *who* is likely to display each of the unique patterns of abortion support.

To assess the demographic and ideological correlates of the unique response patterns underlying abortion attitudes, we used Asparouhov and Muthén’s (2013) three-step approach to latent class

analysis. The three-step approach entails the first two steps of a latent class analysis (i.e., it uses manifest variables to estimate latent classes and assigns participants to the group to which they most likely belong) and adds a third step in which covariates predict latent class membership. Because latent variables are used to capture class membership, these analyses account for the uncertainty in assigning participants to the class to which they most likely belong. Based on the review above, we used the following nine covariates to predict the likelihood of belonging to a given class (vs. the *Pro-life* class): (1) minority status, (2) gender, (3) religious identification, (4) parental status, (5) age, (6) education, (7) income, (8) conservatism, and (9) party identification. We used the *Pro-life* class as our reference group because participants who belonged to this class displayed the most unique response pattern by reliably opposing abortion *even for traumatic reasons*. Thus, the correlates of departing from this latent class capture increases in support for abortion relative to the baseline levels of opposition displayed by the *Pro-life* class.

Table 10 displays the odds ratios of belonging to the given class (relative to the *Pro-life* class) as a function of our covariates. These analyses reveal that only strength of religious identification and party identification consistently predicted class membership. As strength of religious identification increased, the likelihood of belonging in the *Conditional (Pro-life)*, *Conditional (Pro-choice)*, and *Pro-choice* classes (vs. the *Pro-life* class) decreased by approximately one-third, one half, and two-thirds, respectively. Identification with the Republican Party also decreased the likelihood of belonging in the *Conditional (Pro-life)*, *Conditional (Pro-choice)*, and *Pro-choice* classes (vs. the *Pro-life* class) by roughly one-fourth, one-third, and one-third, respectively. Thus, consistent with our review and integrated analyses, both religiosity and partisanship *uniquely* predict class membership.

The remaining demographic and ideological variables were inconsistently associated with latent class membership. For example, each additional degree of education increased the likelihood of belonging in the *Pro-choice* class (vs. the *Pro-life* class) by over 1.5 times but had no impact on membership in the other two latent classes. In contrast, both minorities and parents were roughly half as likely as whites and nonparents, respectively, to belong in the *Pro-choice* class (vs. the *Pro-life* class), but these demographics were again unassociated with membership in the two other latent classes. Finally, men were almost two times more likely than women to belong to the *Conditional (Pro-choice)* class (vs. the *Pro-life* class;  $p = .034$ ), whereas conservatism only decreased the likelihood of being in the *Pro-choice* class (but not the other latent classes) relative to the *Pro-life* class. This latter result shows that ideology correlates with absolutist positions in the abortion debate (i.e., either *Pro-choice* or *Pro-life*) but has a limited impact on the nuanced response patterns underlying abortion support across the distinct traumatic and elective reasons for an abortion.

### Summary

Much of the literature on abortion attitudes has focused on the demographic correlates of abortion support. Here, we review this literature and integrate new empirical analyses to increase understanding of these predictors by demonstrating that (a) younger cohorts support elective and traumatic abortion more than older cohorts, albeit *only* among nonparents, (b) differences in abortion support across religious affiliations exist in both the United States and New Zealand, (c) religiosity plays a decisive role in shaping abortion attitudes within the context of intimate relationships, (d) partisan differences in abortion attitudes extend to multiparty systems, and (e) Openness to Experience is the strongest personality correlate of abortion attitudes and has positive indirect effects on elective and traumatic abortion support via drops in conservatism. Yet surprisingly, our review shows that gender is inconsistently associated with abortion support. This inconsistency is also evident in the new analyses we presented. In analyses examining the personality correlates of abortion support, men were less supportive than women of both elective and traumatic abortion. However, consistent with

**Table 10.** Multinomial Logistic Regression Predicting the Likelihood of Belonging to the Given Latent Class (Relative to the Noted Latent Class) as a Function of Demographic and Attitudinal Covariates

|                          | Conditional (Pro-life) (vs. Pro-life) |           |            | Conditional (Pro-choice) (vs. Pro-life) |           |            | Pro-choice (vs. Pro-life) |           |            |
|--------------------------|---------------------------------------|-----------|------------|---|-----------|------------|---------------------------|-----------|------------|
|                          | <i>b</i>                              | <i>SE</i> | Odds Ratio | <i>b</i>                                | <i>SE</i> | Odds Ratio | <i>b</i>                  | <i>SE</i> | Odds Ratio |
| Minority <sup>a</sup>    | -0.483                                | 0.323     | 0.617      | 0.153                                   | 0.323     | 1.165      | -0.604*                   | 0.296     | 0.547      |
| Male <sup>b</sup>        | 0.310                                 | 0.254     | 1.364      | 0.581*                                  | 0.274     | 1.788      | 0.368                     | 0.237     | 1.445      |
| Religious Identification | -0.340*                               | 0.165     | 0.712      | -0.670***                               | 0.166     | 0.512      | -0.934***                 | 0.155     | 0.393      |
| Parent <sup>c</sup>      | -0.102                                | 0.350     | 0.903      | -0.531                                  | 0.352     | 0.588      | -0.625*                   | 0.311     | 0.535      |
| Age                      | 0.003                                 | 0.008     | 1.003      | 0.016*                                  | 0.008     | 1.016      | 0.007                     | 0.007     | 1.007      |
| Education                | 0.062                                 | 0.119     | 1.064      | 0.051                                   | 0.131     | 1.052      | 0.409***                  | 0.105     | 1.506      |
| Income                   | 0.089 <sup>†</sup>                    | 0.051     | 1.093      | 0.021                                   | 0.063     | 1.021      | 0.120*                    | 0.047     | 1.127      |
| Conservatism             | -0.196 <sup>†</sup>                   | 0.116     | 0.822      | -0.138                                  | 0.119     | 0.872      | -0.523***                 | 0.110     | 0.593      |
| Party ID                 | -0.256**                              | 0.080     | 0.774      | -0.441***                               | 0.084     | 0.643      | -0.417***                 | 0.075     | 0.659      |

<sup>a</sup>Minority (0 = white; 1 = black or other).

<sup>b</sup>Male (0 = women; 1 = men).

<sup>c</sup>Parent (0 = no children; 1 = 1 or more children).

<sup>†</sup>*p* < .10

\**p* < .05

\*\**p* < .01

\*\*\**p* < .001.

Bolded values reflect the average estimated probability that participants were classified in the “correct” latent class. Source: General Social Survey (2018) in the United States. *N* = 1,563.



other research indicating that women are *less* supportive than men of women's reproductive rights (Huang et al., 2014), our new analyses predicting the unique response patterns underlying abortion support showed that men are more likely than women to belong to the *Conditional (Pro-choice)* class relative to the *Pro-life* class. In short, the various new analyses we have presented, combined with our review of existing research, demonstrates that holding traditional religious and political views independently motivate opposition to abortion, but that gender inconsistently correlates with abortion support.

### Gender Role Attitudes and Sexism

Given the (surprisingly) inconsistent association between gender and support for women's reproductive rights, studies have begun to examine the possibility that gender-role attitudes *uniquely* explain attitudes toward abortion. In this section, we review this work to illustrate the impact that gender-role attitudes have on abortion support. We then argue that the reverence and protection reserved for women who conform to traditional gender roles including fulfilling the role of a sacrificial mother (i.e., benevolent sexism) should predict opposition to abortion better than open hostility toward women (i.e., hostile sexism). We provide evidence for our position by reviewing cross-sectional and longitudinal studies that identify a negative association between benevolent sexism and support for both elective and traumatic abortion. We thus provide the most complete overview to date of how traditional gender-role attitudes and, more specifically, benevolent sexism, uniquely restricts women's reproductive rights.

#### *Traditional Gender-Role Attitudes*

The constellation of conservative religious and political ideologies reviewed above that correlate with opposition to abortion suggests that traditional gender-role beliefs may uniquely predict abortion attitudes. Indeed, there are a few reasons why traditional gender-role attitudes may correlate negatively with abortion support. First, traditional gender roles reinforce the belief that men are the breadwinners and women should rule the house and raise children (see Eagly et al., 2000; Greenstein, 1996; Knudsen & Wærness, 2007; Lachance-Grzela & Bouchard, 2010)—gender roles that seem to conflict with supporting women's reproductive rights. Second, traditional gender-role beliefs foster unrealistic expectations about women's inherent ability to be a mother (Lindsey, 2016), which elicit a "motherhood mandate" in which adulthood for women is predicated upon becoming a mother (see Russo, 1976, 1979). Abortion may thus be seen by those who endorse traditional gender-role beliefs as a violation of this mandate and be met with opposition.

Consistent with this perspective, endorsement of traditional gender roles correlates negatively with support for legalized abortion (Hout, 1999; Jelen, 1988; Sahar & Karasawa, 2005; Wang & Buffalo, 2004). For example, Wall and colleagues (1999) showed that scores on the attitudes toward women scale—a common measure of traditional gender-role beliefs (e.g., see Spence & Helmreich, 1972)—correlated negatively with support for abortion in both Slovenia and the United States. Likewise, Krishnan (1991) showed that endorsement of traditional gender roles correlated negatively with elective and traumatic abortion support. Conversely, Alsup and Gillespie (1997) analysed cross-sectional data from 1977 and 1991 and found that support for nontraditional gender roles (e.g., believing that women *should* be able to work outside the home) correlated positively with abortion support. Finally, Mosley and colleagues (2020) found that endorsement of egalitarian gender roles correlated positively with traumatic abortion support in both South Africa and the United States after adjusting for numerous key covariates including age, religiosity, and political identity. Collectively,

these data suggest that people who hold traditional (vs. egalitarian) views about women consistently oppose (vs. support) abortion.

### *Ambivalent Sexism*

We believe that a deeper understanding of the way gender-role attitudes correlate with opposition versus support of abortion requires a more nuanced examination of the type of gender-role attitudes that affect evaluations of women's roles and rights in society. According to ambivalent sexism theory (see Glick & Fiske, 1996, 2001), attitudes toward women are characterized by ambivalence—an ambivalence that is not captured by unidimensional measures of sexism or traditional gender-role attitudes. These ambivalent attitudes exist because the interpersonal dependence between men and women (e.g., intimacy, sex), along with intergroup competition between men and women over scarce resources (e.g., status, social power), elicit a set of dichotomized attitudes toward women. Whereas hostile sexism entails an antipathy towards women who violate traditional gender roles and contest men's societal status and power (e.g., feminists), benevolent sexism reveres and offers protection to gender-conforming women who have restricted societal status and power (e.g., homemakers and mothers). Both forms of sexism, however, correlate positively with each other and contribute to gender inequality. For example, Glick and colleagues (2000) examined societal levels of hostile and benevolent sexism across 19 nations and found that both forms of sexism correlated positively with nation-wide levels of gender inequality.

By failing to distinguish between hostile and benevolent sexism, research assessing the negative association between traditional gender-role attitudes and abortion support has left the specific views of women that foster abortion opposition unclear. In a research program we developed over the last decade (e.g., see Huang et al., 2014, 2016; Osborne & Davies, 2009, 2012), we predicted that opposition to abortion would be more closely tied to benevolent sexism than to hostile sexism. For one, the paternalistic rewards reserved for women who conform to traditional gender roles emerge *because* men rely on women for heterosexual intimacy and reproduction. The complementary gender-role differentiation that underlies benevolent sexism also suggests that women are better suited than men to domestic and child-rearing tasks (see Fields et al., 2010; Glick & Fiske, 2001). Finally, traditional views of femininity and gender roles foster the belief that women are instinctively nurturing (Kumar et al., 2009) and should make sacrifices for their family (Huang et al., 2016). Benevolent sexism should thus be particularly relevant to the regulation of women's reproductive behaviors because women who seek to have an abortion may be seen by those who hold benevolently sexist attitudes as shunning the very roles and responsibilities that give rise to men's adoration and protection (see also Murphy et al., 2011; Sutton et al., 2011).

That is not to say that hostile sexism should be completely *un*associated with abortion attitudes (e.g., see Schaffner, 2021, for a discussion of the increased prominence of hostile sexism in predicting political attitudes). Given that women's reproductive rights are closely connected with feminism and the sexual liberation movement, hostile sexism should predict opposition to elective abortion. Indeed, items on the hostile-sexism scale include statements referring to feminists and other women seeking to "gain power and control over men." The perceived sexual freedom afforded by elective abortion could also reify the view that some women are "temptresses" in the eyes of the hostile sexist. But, as highlighted above, elective abortion differs notably from traumatic abortion in that the latter scenarios involve additional trauma that should absolve women who seek an abortion from the ire of hostile sexism. Thus, the hostility reserved for gender-nonconforming women should be specific to those who seek elective abortion.

Osborne and Davies (2009, 2012) were the first to examine these distinct possibilities by investigating the associations between both forms of sexism and attitudes toward elective and traumatic abortion in two Internet-based samples in the United States ( $Ns = 242$  and  $529$ , respectively).

Because traditional gender roles implore women to be caregivers and mothers (Gaunt, 2013; Hare-Mustin et al., 1983; Hare-Mustin & Broderick, 1979; Holton et al., 2009; Lindsey, 2016), the authors hypothesized that benevolent sexism would correlate negatively with support for elective abortion. Given that society expects mothers to sacrifice for their children, the authors reasoned that benevolent sexism should also correlate negatively with support for abortion *even when the woman's life would be endangered* by the pregnancy (i.e., traumatic abortion). As hypothesized, benevolent sexism correlated negatively with support for both elective and traumatic abortion in both studies. Hostile sexism, however, only correlated negatively with elective abortion support—an association the authors argued was due to the perceived connection between elective abortion and the feminist/women's rights movement.

Subsequent work further demonstrates that the warmth and protection reserved for gender-conforming women, as captured by benevolent sexism, uniquely predicts abortion attitudes (see Sutton et al., 2022). Huang and colleagues (2014) extended the results from Osborne and Davies (2009, 2012) by using a nation-wide random sample of adults in New Zealand and by incorporating important covariates that were missing from the initial work. Specifically, Huang et al. used data from Time 3 of the NZAVS (i.e., the first timepoint to assess elective and traumatic abortion support) to examine the links between benevolent and hostile sexism in a new national context using representative data and statistically adjusting for participants' (a) gender, (b) religiosity, (c) number of children, (d) opposition to gender equality in the workplace, and (e) conservatism. After adjusting for these covariates, hostile sexism surprisingly correlated negatively with traumatic, but not elective, abortion support. Nevertheless, as hypothesized, benevolent sexism correlated negatively with support for both elective and traumatic abortion. The strength of the associations benevolent and hostile sexism had with support for elective and traumatic abortion did not, however, vary across women and men, once again illustrating the surprisingly inconsequential role of gender in the abortion debate. Further analyses demonstrated that both religiosity and conservatism had indirect effects on elective and traumatic abortion support via benevolent sexism. In other words, part of the reason why religiosity and conservatism undermine abortion support is because both religion (Burn & Busso, 2005) and conservative political beliefs (Christopher & Mull, 2006) foster benevolent sexism.

Huang and colleagues (2016) extended these cross-sectional data to provide a stronger test that benevolent sexism undermines support for both elective and traumatic abortion by conducting longitudinal analyses of two waves of data from the NZAVS (Times 3 and 4;  $N = 12,299$ ). After adjusting for the stability of both elective and traumatic abortion support, *only* benevolent sexism correlated negatively with support for both types of abortion. Rather than the open antagonism expressed by hostile sexism, the reverence and paternalistic idealization of women central to benevolent sexism preceded decreases in support for abortion *even* in cases where the woman's life would be endangered (i.e., traumatic abortion). These results demonstrate the harmful effects of benevolent sexism on support for women's reproductive rights and show—for the first time—that the endorsement of benevolent sexism *precedes* abortion attitudes.

What might explain the negative association between benevolent sexism and support for abortion? To answer this important question, Huang and colleagues (2016) investigated cross-sectional data from an undergraduate sample of participants in New Zealand ( $N = 309$ ) in a follow-up study. Participants completed multi-item measures of elective and traumatic abortion support, as well as Glick and Fiske's (1996) 22-item ambivalent sexism inventory and the Attitudes Toward Motherhood scale by Holton and colleagues (2009). Example items from the Attitudes Toward Motherhood scale include, "A woman is not a 'real woman' until she becomes a mother" and "A woman can live a full and happy life without ever having children" (reverse-coded). Because benevolent sexism emerges in part due to men's reliance on women for heterosexual intimacy and reproduction (see Glick & Fiske,

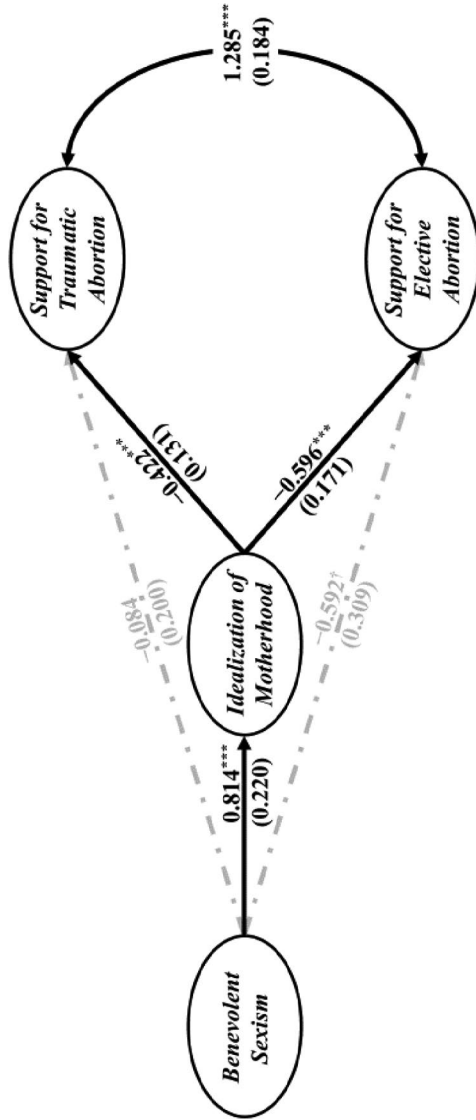
2001), the authors predicted that attitudes toward motherhood would mediate the negative relationship between benevolent sexism and support for elective and traumatic abortion.

Figure 11 displays results consistent with Huang and colleagues' (2016) hypotheses. Specifically, benevolent sexism correlated positively with the idealization of motherhood which, in turn, correlated negatively with support for both elective and traumatic abortion. Moreover, the indirect effects of benevolent sexism on support for both types of abortion through the idealization of motherhood were significant (i.e.,  $B_{\text{Indirect Elective}} = -0.485$ , BC 95% CI [-0.982, -0.197],  $p = .018$  and  $B_{\text{Indirect Traumatic}} = -0.343$ , BC 95% CI [-0.718, -0.136],  $p = .022$ ). Notably, these associations emerged *after* adjusting for hostile sexism, indicating that benevolent sexism uniquely predicts abortion support through the idealization of motherhood. Because the direct effects of benevolent sexism on support for elective and traumatic abortion were nonsignificant, these results reveal that the idealization of motherhood fully mediates the relationships between benevolent sexism and abortion attitudes. Taken together, these results show that benevolent sexism undermines support for women's reproductive rights by fostering idealized views of motherhood. That is, the interpersonal dependence between men and women for intimacy and sex that gives rise to benevolent sexism produces an idealized view of women that constrains them to a "motherhood mandate." Opposition to abortion is thus proximally rooted in the defiance of this mandate.

### Summary

The evidence we have reviewed illustrates that traditional gender-role attitudes *independently* predict abortion attitudes. Because traditional gender roles confine women to domestic and child-rearing tasks (i.e., roles that may be seen by some as conflicting with the decision to terminate a pregnancy), endorsement of these beliefs should correlate negatively with support for women's reproductive autonomy. Consistent with this argument, the extant literature reveals that traditional gender-role attitudes correlate negatively with support for both elective and traumatic abortion. Moreover, these results generalize across both Western democracies (Hout, 1999; Jelen, 1988; Sahar & Karasawa, 2005; Wang & Buffalo, 2004) and Eastern European countries (Wall et al., 1999), thus demonstrating the robustness of this association.

Noting the multifaceted nature of gender-role attitudes, we then focused on the impact that ambivalent sexism has on abortion support. We argued that benevolent sexism would *uniquely* undermine abortion support even when carrying the pregnancy to term would endanger the woman's life. This is because benevolent sexism reserves care, warmth, and reverence for women who conform to traditional gender roles in exchange for heterosexual intimacy and sex (Glick & Fiske, 2001)—behaviors that contribute to sexual reproduction. Our literature review provided support for these predictions across Internet-based samples in the United States (Osborne & Davies, 2009, 2012) and nationwide random samples of the New Zealand population (Huang et al., 2014). Longitudinal research further demonstrates that benevolent sexism temporally precedes opposition to both elective and traumatic abortion (Huang et al., 2016), and a university-based convenience sample shows that the idealization of motherhood mediates these associations (Huang et al., 2016). Thus, despite its superficially positive tone, benevolent sexism plays an independent role in the abortion debate because the idealization of women's traditional familial roles encourages men and women to prioritize motherhood at the sacrifice of women's own desires, goals, and agency—including when motherhood poses substantial risks to women's health.



**Figure 11.** Direct and indirect effects of benevolent sexism on support for traumatic and elective abortion in New Zealand. Results control for the effects of hostile sexism on the idealization of motherhood and support for both (a) traumatic and (b) elective abortion. Figure is adapted from Huang et al. (2016). Values reflect unstandardized regression coefficients (standard errors in parentheses). Data are derived from a university sample of undergraduate students in New Zealand (N = 309). †p < .10; \*\*\*p < .001.

## Theoretical Integration: Understanding Why the Allure of Benevolent Sexism Undermines Abortion Support

The important role of benevolent sexism in reducing both men's and women's support of women's reproductive rights provides valuable insight into the relative stability of abortion attitudes across time, even in comparatively egalitarian nations like the United States and New Zealand. Although benevolent sexism provides men and women with a romantic, complementary, and idealized view of intimate relationships, the reverence of women's traditional caregiving roles and the idealization of motherhood central to these attitudes ultimately restricts women's sociopolitical rights. In this final section, we highlight how the potential relational rewards of benevolent sexism within heterosexual relationships also undermines women's reproductive rights and restrict their interpersonal, intergroup, and societal freedoms. We begin by explaining how benevolent sexism provides men and women who are in romantic relationships with interpersonal benefits but ultimately undermines women's reproductive freedoms. We then examine the implications of these interpersonal processes for intergroup relations by outlining the additional ways in which the normative prescriptions sustained by benevolent sexism constrain women's reproductive autonomy and broader societal rights. Finally, we review research on the societal benefits of extending women's reproductive rights to highlight what is at stake in the abortion debate.

### *Interpersonal Processes That Encourage and Maintain Benevolent Sexism*

A central draw of benevolent sexism for both men and women involves the promise of fulfilling, cooperative, and intimate relationships. Benevolent sexism celebrates men's and women's mutual interdependence by emphasizing that men and women have both unique and complementary qualities and, thus, must depend on one another: Men as protectors of, and providers for, women whose special communal qualities make them loving and caring wives and mothers. These romanticized roles and beliefs appeal to both men and women because they promise relationship security (Hammond et al., 2020). For men, the fulfilment of distinct gender roles justifies and supports men's high-status societal positions, as well as promises them romantic intimacy and support. Indeed, the more strongly men agree with benevolent sexism, the more satisfying they find their intimate relationships in general (Hammond & Overall, 2013). This is especially true when their women partners also agree with benevolent sexism and are thus more supportive of men's personal goals and ambitions (Hammond & Overall, 2015). Coupled with the maintenance of powerful social positions, these relational benefits encourage and maintain men's benevolent sexism.

These idealized relationship roles, as well as the positive relationship dynamics they promise, help explain why women endorse benevolent sexism (Hammond et al., 2020). The romantic qualities expressed by benevolent sexism including the prescription that men should be caring, protective, and devoted partners appeal to women because they provide security in intimate relationships (Cross & Overall, 2018; Cross et al., 2016; Gul & Kupfer, 2019). Women are also more likely to agree with benevolent sexism over time when their male partner endorses benevolent sexism because these women feel more secure, loved, and regarded in their relationship (Hammond et al., 2016). The warm and caring tone of benevolent sexism, coupled with the importance of experiencing these qualities within close relationships, is why benevolent sexism is not only seen as nonsexist (Becker & Swim, 2011) but also as supportive of women's rights in general (Hopkins-Doyle et al., 2019).

Although men's benevolent sexism produces caring and chivalrous behavior (Overall et al., 2011) as well as provides relationship security (Cross et al., 2016; Hammond & Overall, 2015), men's and women's endorsement of benevolent sexism restricts women's freedoms both in intimate relationships and outside the home. Consistent with seeing women as communal but needing care

and protection, men who endorse benevolent sexism provide competence-impeding and protective behavior that limits women's personal career advancement (e.g., Hammond & Overall, 2015).

Critically, these same processes account for women's support of roles, practices, and policies that limit their own freedom. Women's endorsement of benevolent sexism (and the associated promise of reverence and protection) directs women's goals and priorities toward intimate relationships and familial roles (Lee et al., 2010), which also reduces their ambitions outside the home (Fernández et al., 2006; Lee et al., 2010) and limits their own reproductive choices (as shown across the research summarized here). The positive security-enhancing processes within intimate relationships that arise from benevolent sexism also undermine efforts to promote women's broader sociopolitical rights (Overall & Hammond, 2018). The need for relationship security is a fundamental human motive, and the immediate benefits that are felt or promised within people's relationships compete with support for broader policies that offer less immediate and tangible rewards.

### *Benevolent Sexism, Reproductive Autonomy, and the Monitoring of Women's Behavior*

In addition to undermining support for women's reproductive autonomy, benevolent sexism encourages the monitoring of women's behaviors—especially women who are pregnant. For example, Sutton and colleagues (2011) demonstrated that benevolent sexism correlated positively with the willingness to restrict pregnant women's behaviors including (a) using a microwave, (b) sleeping on one's side, and (c) exercising. Critically, these associations were mediated by the perception that these behaviors could place the pregnant woman's fetus at risk. Murphy and colleagues (2011) further showed that, whereas both benevolent and hostile sexism predicted the endorsement of behavioral restrictions for pregnant women (see Study 1), only hostile sexism correlated positively with punitive attitudes toward expectant mothers who flout these restrictions.

Whereas benevolent sexism plays a more important role than misogyny in explaining opposition to abortion, hostile sexism appears to restrict women's reproductive autonomy by legitimizing men's control over women's reproductive health decisions. Across two studies, Petterson and Sutton (2018) demonstrated that hostile sexism correlated positively with the endorsement of men's control over women's decisions about abortion and childbirth. Specifically, hostile sexism correlated positively with the support for a man's right to veto a woman's decision to have an abortion, as well the view that a man should not be obligated to financially support an unwanted child. Thus, although benevolent sexism is the leading form of sexism that underlies opposition to abortion, misogyny also uniquely overrides women's reproductive health decisions.

### *Consequences of Women's Reproductive Rights*

Examination of the societal implications of women's reproductive rights helps to illustrate what is at stake in the abortion debate and why it is important to identify the demographic and ideological correlates of abortion attitudes. Pezzini (2005) examined women's well-being in 12 European countries over a more-than-20-year period (i.e., 1975–1998). Because increased access to birth control and the legalization of abortion occurred in different years across countries, Pezzini was able to estimate the impact the introduction of reproductive rights had on women's well-being. Notably, the onset of legalized abortion preceded increases in life satisfaction, but *only* among women of childbearing age. Compared to women in countries where abortion was illegal, women who were of childbearing age when their country legalized abortion were also more likely to (a) work outside the home, (b) obtain a higher degree, and (c) earn more money. The legalization of abortion was, however, *unassociated* with men's well-being. Thus, legalized abortion confers benefits to women, but *not* at the expense of men.

Other research further highlights the broad benefits that accompany increases in women's reproductive rights. For example, recent analyses of international data reveal that countries where abortion is broadly legal (i.e., where women can obtain an abortion on request) have lower rates of unintended pregnancies than do countries with legal prohibitions on abortion (Bearak et al., 2020). Critically, these lower rates of unintended pregnancies are *not* due to increases in the use of abortion—abortion rates are roughly similar in countries with and without legal restrictions (Bearak et al., 2020). Accordingly, Santelli and colleagues (2007) showed that the decline in teenage pregnancies seen in the United States between 1995 and 2002 was (at least in part) attributable to increases in the use of contraceptives among teens. Moreover, Goldin and Katz (2002) found that increases in the accessibility of birth control in the 1970s improved educational outcomes for young unmarried women with college degrees in the United States. The authors argue that increased access to birth control allowed women to delay marriage and pursue postgraduate studies before starting a family.

The legalization of abortion also affects society indirectly. Using cross-sectional data from the United States dating back to 1973 and spanning through to 1997, Donohue and Levitt (2001) found that abortion rates in the 1970s correlated negatively with crime rates 20 years later: A 10% decrease in live births in each cohort predicted an approximately 10% decrease in crime 20 years later. Although controversy over this finding exists and some have failed to replicate these results (e.g., see Joyce, 2004; Kahane et al., 2008), a follow-up study by Donohue and Levitt (2004) further showed that abortion rates have negative cross-lagged effects on crime rates. Collectively, these findings demonstrate that women's reproductive rights correlate with numerous socially relevant outcomes, highlighting the importance of understanding the demographic and ideological correlates of abortion attitudes.

## Conclusion

Abortion is a cornerstone issue in the culture war currently enveloping many nations globally. Yet the political psychology underlying this divisive issue has received relatively limited attention in the literature. We addressed this key oversight by providing an extensive review of the demographic and ideological correlates of abortion attitudes and by integrating new cross-sectional and longitudinal analyses into our review. Our integrative approach illustrated important nuances in abortion attitudes by showing that support depended on whether abortion was sought for traumatic or elective reasons. Nonetheless, a plurality of Americans (i.e., 43.8%) consistently supported a woman's right to choose regardless of the reason for the abortion. By contrast, only a small minority of respondents (i.e., 14.8%) reported unwavering opposition to abortion, whereas over 85% of Americans supported abortion for trauma-based reasons including severe fetal abnormalities and risks to the woman's life.

In acknowledging this important distinction between elective and traumatic abortion, we then identified a gradual, albeit significant, increase in abortion support over time in both the United States (for elective abortion) and New Zealand (for both elective and traumatic abortion). Yet we also illustrated that abortion attitudes remain split across (a) age, (b) religion, (c) partisanship, and (d) personality. Our new analyses further revealed that abortion support declines with age, religious identification, and conservatism (both in terms of partisanship and ideological identification), but that Openness to Experience increases abortion support both directly and indirectly via declines in conservatism. Finally, men's and women's religiosity independently decreased their romantic partner's elective and traumatic abortion support.

Our review then examined an intriguing paradox: Abortion legislation specifically targets women, yet gender differences are only sporadically observed in the literature. Indeed, some work (Huang et al., 2014), as well as the new analyses presented in our review, indicate that



men are sometimes more, not less, supportive of abortion. Thus, we argued that attitudes toward women's "proper" place in society, rather than gender per se, independently predict abortion attitudes. Our empirical review and theoretical analyses illustrate that ambivalent sexism uniquely advances understanding of the attitudes that undermine support for women's reproductive rights. In particular, cross-sectional and longitudinal work shows that both men's and women's benevolent sexism, rather than hostile sexism, reliably correlates negatively with abortion support—even in traumatic cases where carrying the pregnancy to term will endanger the woman's life. Our integrative review and theoretical applications emphasize that the paternalistic chivalry of benevolent sexism undermines support for women's reproductive rights and helps to explain why women can sometimes be more opposed than men to abortion. The reverence and security benevolent sexism seemingly promise women helps to explain *why* views on abortion remain divisive across the globe, why these attitudes continue to restrict women's freedoms, and why these restrictions are so hard to combat.

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Correspondence concerning this article should be addressed to Danny Osborne, School of Psychology, University of Auckland, Private Bag 92019, Auckland 1142, New Zealand. E-mail: d.osborne@auckland.ac.nz

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