Who's Pro-Choice and Why

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In the United States, women and men have had roughly the same attitudes on abortion for decades. This seems strange, since the costs of an unplanned conception can be much greater for women. But they may be greatest for women most at risk—for single women of reproductive age—and for their families. Results of a telephone survey in and around Ann Arbor, Michigan, show that unmarried women between menarche and menopause are more likely to express pro-choice opinions, to vote for pro-choice candidates for public office, and to spend time or money on pro-choice activities. So are their grandparents, parents, and siblings. Results of a state-by-state comparison of governors' and legislatures' positions on abortion suggest that both are more pro-choice as the proportion of women at risk goes up. Perhaps even more important, legal restrictions on abortion, requiring parental notice or consent, and reducing the availability of public funding, are more common in states with lower proportions of single, reproductive-aged women.

KEY WORDS: Abortion, women, family, female choice, nepotism, sexual selection.

PART I: MEN VS WOMEN

The United States Supreme Court, in its *Roe vs Wade* decision, legalized abortion in 1973. Since then, people have been asked again and again if that decision should be overturned. Oddly enough, more often than not, polls have shown women to be less pro-choice than men overall, though the differences have been very small (Rodman, Sarvis, and Bonar 1987).

Gallup's polls are cases in point. As of October 1989, 35% of women favored overturning the *Roe vs Wade* decision, compared to just 32% of men; at the same time, 58% of women opposed overturning the decision, compared to 63% of men (*Gallup Reports*, October 1989). On the other hand, when asked more specific questions about abortion, women tended to favor fewer restrictions. As of July 1989, 56% of men, but only 52% of women,

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favored state laws which would ban abortion except to save a mother's life; 71% of men, but only 63% of women, favored state laws requiring parental consent for minors' abortions; and 39% of men, but only 33% of women, favored state laws which would restrict abortion clinic operations (*Gallup Reports*, July 1989). Again, the remarkable fact is that men and women differ very little, overall, in their attitudes about abortion.

This seems strange, since women have so much more to lose from an unplanned conception than men. All females begin, by definition, investing more in offspring. Eggs carry genes and nutritents; sperm carry genes and little else. From that beginning, discrepencies often grow large. Human females, of course, spend nine months gestating, up to nine years lactating, and many more years caring for children; human males have the option of investing enough to raise generations of children and grandchildren, or just enough to make a few hundred million sperm. As Darwin first pointed out, and as Trivers made clearer a century later, that difference in investment drives sexual selection (Darwin 1871; Trivers 1972). The sex that invests less tends to compete for mates; the sex that invests more tends to choose among the competitors. In the vast majority of cases, males compete, females choose. Though the opposite often happens, this generalization tends to be true of men and women (e.g., Betzig 1988a).

When there is an unplanned conception—by an unfavorable mate or under otherwise unfavorable conditions—investing parents should cut their losses as soon as they can (see Hamilton 1966). Again, that cut can be made even before conception, just after insemination, for men. For women, losses can be cut along a shorter continuum, beginning, soon after conception, with abortion (see Hrdy 1991). To the extent that a father's reproductive interests intersect with a mother's, where conditions are unfavorable to the child, abortion may be favorable to both. But to the extent that the parents' interests do not intersect, a father whose investment stops with sperm has something to gain reproductively, and may have nothing more to lose, when the conception is carried to term. The child's mother, when it has been abandoned by its father, will stand to gain the same, but stands to lose much more. To the extent that female choice is effective before conception, it should ensure that parents' interests intersect, at least to some extent.

For any species in which the allocation of parental effort per offspring is large, selection should favor careful "family planning." Lack's classic experiments with swifts in the 1950s first bore this out: birds with too many young in their broods often fledged too few (Lack, Gibb, and Owen 1957). For any caretaking parent, limited effort should be allocated to limited numbers of young, and it should be concentrated on those with the best reproductive prospects. Usually, these will be genetically related, in good health, and timed to get as much care as possible from mother, father, and other family members. Many studies since Lack's have shown that investing parents discriminate carefully among related and unrelated, sick and healthy

young, and that they bear and rear more of them under better conditions (reviews in Daly and Wilson 1983, Trivers 1985, Alcock 1989).

A few studies suggest these patterns hold for humans. In most cases, the allocation of parental effort by human mothers and fathers is huge. Accordingly, both carefully monitor relatedness: within and across cultures, paternal investment has been linked to paternity confidence (Gaulin and Schlegel 1980; Flinn 1981; Hartung 1985; see also, Betzig 1989 on divorce frequency following wife's adultery; and Thornhill and Thornhill 1990 on husband's acts following wife's rape); in a Los Angeles sample, married women were much more likely to end a pregnancy in abortion if they were uncertain that their husband had been responsible for the conception (Essock-Vitale and McGuire 1985, 1988); and child abuse and neglect are as much as a hundred times more common by stepmothers and stepfathers (Daly and Wilson 1981, 1985, 1988; Lenington 1981; Lightcap, Kurland, and Burgess 1982; Flinn 1988). Both parents appear to monitor children's health: several studies in western countries indicate higher rates of abuse and abandonment of severely handicapped children (Daly and Wilson 1981). And both parents appear to be keenly aware of available care: child abuse and neglect increase with poverty, and are much more common among unmarried parents (Daly and Wilson 1981, 1985, 1988); unwed American women are six to ten times more likely than married women to end a pregnancy in abortion (Henshaw, Binkin, Blaine, and Smith 1985; Essock-Vitale and McGuire 1985, 1988); and abortion or infanticide follow conceptions and births under unfavorable conditions—often when fathers disclaim responsibility for children—across traditional cultures (Daly and Wilson 1988). This last is brought home in Bugos and McCarthy's study of infanticide among the Ayoreo, small farmers and foragers of Bolivia and Paraguay. They interviewed 29 women known to have practiced infanticide, found that more than a third of all births to these women were followed by infanticide, and, when they asked for an explanation, were told "that the father already had left the mother or the mother thought the father would leave" (Bugos and McCarthy 1984: 512).

This brings us back to conflict. We should, again, expect females to choose mates willing and able to invest in children; and where female choice is effective in this respect parents' interests should intersect. Where they do, both parents should favor carrying a child to term where its reproductive prospects are good; and both should favor cutting their losses as soon as they can—sometimes by abortion—where its reproductive prospects, compared to another child's conceived under other conditions, are sufficiently poor (see Trivers 1972).

Female choice may be circumvented by several routes. A woman may deceive herself into believing that the man from whom she gets sperm would be willing and able to invest in her children; a man may deceive the woman into believing that he is willing and able to invest; or, in the extreme case, a man unwilling or unable to invest may have sex with a woman by force. Usually, only the last is classed as "rape." But if the woman is not allowed,

after conception, to choose to end her pregnancy by abortion, the effect in all three cases may be the same. The mother will be made to invest, against her will, in a child; the father will not be made to invest at all. Again, the genetic payoff to both parents will be equal; the investment costs, of course, will not.

These considerations prompt the following predictions. Most often, men's and women's interests should overlap enough that both should favor abortion under conditions unfavorable to the child's survival and reproduction, and both should favor carrying a child to term under favorable conditions. Less often, men's and women's interests should conflict. Where they do, men may have little or nothing to lose, and something to gain, by seeing the conception carried to term: they may be expected to oppose abortion. Women, on the other hand, should gain the same, but stand much more to lose, in carrying the conception to term: they may be expected to favor abortion.

Why, then, do the polls consistently show that men favor legal abortions at least as often as women? The answer may be that pollsters aren't asking the right questions. Not all women are at risk of an unplanned conception. Women under 13 years, the mean age of menarche in the U.S., and women over 50 years, the mean age of menopause, are no more at risk of an unwanted pregnancy than men (Udry and Cliquet 1982, on menarche; Gray 1976, on menopause). And, in as much as marriage, a legal contract to provide, guarantees paternal investment, single women should be much more at risk than married women (see also, Hill and Low 1991). These predictions seem intuitively obvious; oddly enough, neither has ever been tested. They are here.

Methods

Telephone interviews were made to households in and around Ann Arbor, Michigan in June 1990. All were conducted by the second author, whose attitudes toward legal abortion are, incidentally, diametrically opposed to those of the first. A sample of 1000 telephone numbers was taken at random from residential listings published in the 1989–1990 Ann Arbor/Ypsilanti area directory published by Michigan Bell. That area includes: Ann Arbor, a large town of around 108,000 residents; Ypsilanti, a town of around 23,000 residents; Chelsea, and small town of 3900; and Dexter, Manchester, Milan, and Whitmore Lake, rural towns of less than 2500 residents each as of the last available count in 1986 (*County and City Data Book*, 1988).

The interviewer began each conversation with a set introduction. It ran, "Hello, this is Leslie Lombardo calling from the University of Michigan. We're conducting a survey of people's attitudes on some important current events, and we'd like to include you. Your phone number was generated by a computer, so I have no idea who I'm talking to. All of your answers will be completely anonymous; and your participation will be completely vol-

untary. Altogether, this survey should take about five minutes. Is it okay if we start now?"

Each telephone number was tried six times, or until a respondent was reached; the calls were always made on two evenings, two afternoons, and two weekends. Of the 1000 numbers sampled, 15 turned out to be nonworking numbers, 34 had been changed, 45 had been disconnected, and 121 were called all six times without a response. Of the 785 respondents reached, 314 (40%) declined to take part in the survey, and 471 (60%) said "yes."

The survey began with five questions about abortion. Responses to the first two questions were strongly pro-choice: 92% and 88% of respondents, respectively, agreed that abortion should be allowed whenever the pregnancy threatens the life of the mother, and that abortion should be allowed in cases of incest or rape. Answers to the other three questions were much less unanimous. They are the focus of this study. Question No. 3 read: "Some people say that abortion should be allowed whenever the woman considers it best. Do you agree or disagree with that?" Sixty percent of respondents agreed with that statement. This percentage is nearly the same as those in national polls (e.g., *Gallup Reports* 1989). Question No. 4 read: "Have you ever voted for a candidate for public office based partly on their views on abortion? Which views did they support?" Thirty-eight percent of respondents said they had voted based on a candidate's views on abortion; of these, 63% had voted for candidates who were pro-abortion. Question No. 5 read: "Finally, have you ever contributed time or money to pro- or anti-abortion cause? Which cause?" Twenty-six percent of respondents said they had contributed money or time, of these, 62% had contributed to a pro-abortion cause.

The survey ended with questions on demographic background, including age, sex, marital status, education, income, and religion. These data are summed up in Table 1.

Results

In this poll, as in other polls, sex alone did not predict attitudes and practices on abortion (Table 2). The biggest difference by sex was in voting patterns; 67% of women, but just 56% of men who had voted with the abortion issue in mind, had voted pro-choice. The smallest difference was in contributions, in this case, 62% of both men and women who had given time or money to pro- or anti-abortion activities supported legal abortion.

Neither did women's age, alone, predict positions on abortion (Table 3). Compared to women over 50 years, the premenopausal women who responded to this survey were very slightly more pro-choice in attitudes and voting patterns, they were slightly less pro-choice in contributions of money and time; but none of these were significant differences. Nor did having a pre- or postmenopausal wife seem to matter much for male respondents. The sample of men with wives over 50 who responded to these questions

Table 1. Characteristics of the Ann Arbor Sample

	Number	Percent
Sex		
Male	176	37.37
Female	295	62.63
Age		
<20	11	2.33
20–29	138	29.30
30–39	122	25.90
40–49	84	17.83
50–59	50	10.62
60–69	35	7.43
70–79	21	4.46
80–89	9	1.91
>90	1	0.21
Marital status		
Single	85	18.05
Married	330	70.06
Widowed, Divorced, or Separated	56	11.89
Education		
No college	115	24.42
Some college	118	25.05
B.A., B.S.	117	24.81
Some postcollege	90	19.12
Ph.D., M.D., J.D., or D.D.S.	31	6.58
Income (in K)		
<10	23	5.79
10–19	49	12.34
20–29	63	15.87
30–39	77	19.39
40–49	47	11.84
50–59	47	11.84
60–69	33	8.31
70–79	18	4.53
80–89	11	2.77
90–99	6	1.51
>100	23	5.79
Religion		
None	86	18.53
Protestant	232	50.00
Catholic	122	26.29
Other	24	5.17

Table 2. Effects of Sex: Women vs Men

	Attitudes		Votes		Gifts	
	Pro-Choice	Pro-Life	Pro-Choice	Pro-Life	Pro-Choice	Pro-Life
Women	167 (61%)	108 (39%)	83 (67%)	41 (33%)	52 (62%)	32 (38%)
Men	100 (58%)	69 (41%)	32 (56%)	25 (44%)	23 (62%)	14 (38%)
	$X^2 = 0.106, p = 0.7451$		$X^2 = 1.964, p = 0.1611$		$X^2 = 0.001, p = 0.9876$	

In this and other tables, "attitudes" refers to agreement or disagreement with the survey statement, "abortion should be allowed whenever the woman considers it best;" "votes" refers to votes for candidates for public office based on their views on abortion, and "gifts" refers to contributions of time or money to legalize or criminalize abortion.

Table 3. Effects of Age: Pre- vs Post-Menopausal Women or Wives

	Attitudes		Votes		Gifts	
	Pro-Choice	Pro-Life	Pro-Choice	Pro-Life	Pro-Choice	Pro-Life
Women 13–50	125 (62%)	78 (38%)	72 (69%)	33 (31%)	38 (60%)	25 (40%)
Women >50	42 (58%)	30 (42%)	11 (58%)	8 (42%)	14 (67%)	7 (33%)
	$X^2 = 0.234, p = 0.6232$		$X^2 = 0.829, p = 0.3627$		$X^2 = 0.269, p = 0.6038$	
Wife 13–50	54 (59%)	37 (41%)	18 (55%)	15 (45%)	14 (70%)	6 (30%)
Wife >50	9 (53%)	8 (47%)	1 (20%)	4 (80%)	1 (25%)	3 (75%)
	$X^2 = 0.421, p = 0.6232$					

on abortion was unfortunately very small; the pattern that emerges suggests that attitudes, voting, and gifts all tend to be more pro-choice if a man has a premenopausal wife.

The big difference was made by marital status (Table 4). As predicted, single women were more pro-choice on every question than married women; they were significantly more pro-choice in attitudes and in gifts of time or money. On the other hand, marital status did not make a significant difference for men. Though single men were marginally more pro-choice than married men overall, none of the differences is statistically significant. Compared to single men, single women tended to be more pro-choice on every measure. Seventy-three percent of single women, but just 61% of single men, had a pro-choice attitude; 77% of single women, but just 72% of single men, had voted pro-choice; and 94% of single women, but just 62% of single men, had contributed time or money to pro-choice activities. Among married women and men, these distinctions are blurred. Married men are slightly more pro-choice in attitudes and gifts of time and money; married women

Table 4. Effects of Marital Status: Single vs Married Women and Men

	Attitudes		Votes		Gifts	
	Pro-Choice	Pro-Life	Pro-Choice	Pro-Life	Pro-Choice	Pro-Life
Single Women	55 (73%)	20 (27%)	23 (77%)	7 (23%)	15 (94%)	1 (6%)
Married Women	112 (56%)	88 (44%)	60 (64%)	34 (36%)	37 (54%)	31 (46%)
	$X^2 = 6.871, p = 0.0088$		$X^2 = 1.693, p = 0.1932$		$X^2 = 8.499, p = 0.0036$	
Single Men	37 (61%)	24 (39%)	13 (72%)	5 (28%)	8 (62%)	5 (38%)
Married Men	63 (58%)	45 (42%)	19 (49%)	20 (51%)	15 (63%)	9 (37%)
	$X^2 = 0.087, p = 0.7680$		$X^2 = 2.763, p = 0.0965$		$X^2 = 0.003, p = 0.8541$	

Note that "single" includes widowed, divorced, and never married; married includes married or engaged to be married at the time of the survey.

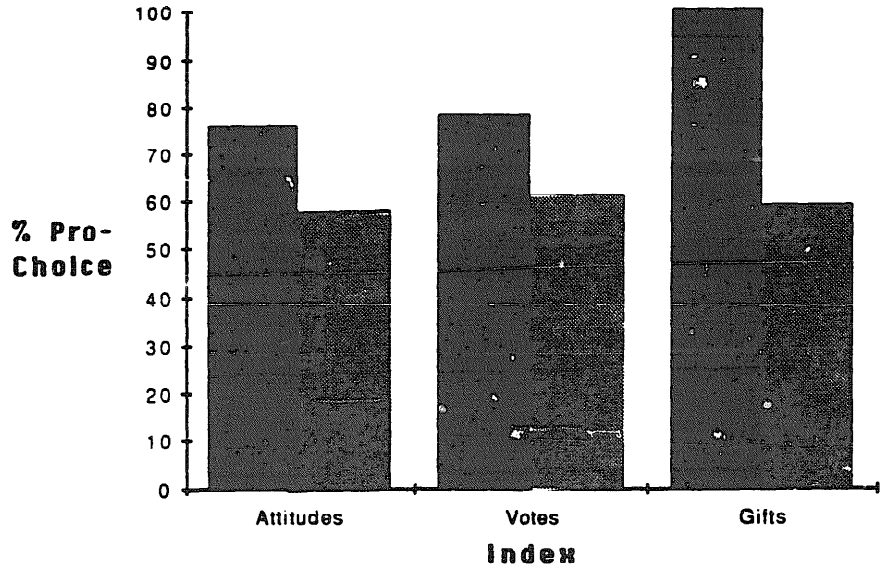

FIGURE 1. Percent of pro-choice responses of single, 13–50 year-old women (dark bars), vs all other women and men (speckled bars). Ratios, in numbers of pro-choice:pro-life responses, are: 32:10 for women "at risk" vs 235:167 for everybody else on attitudes, 18:5 vs 97:61 on votes, and 8:0 vs 67:46 on gifts. Statistics are $X^2 = 4.988$, $p = 0.0255$ on attitudes, $X^2 = 2.466$, $p = 0.1163$ on votes, and $X^2 = 5.254$, $p = 0.0219$ on gifts.

are somewhat more pro-choice in voting patterns. None of these differences is statistically significant.

Finally, as expected, the highest proportion of pro-choice attitudes, voting practices, and gifts of money and time came from the sample most at risk of an unplanned conception. That is, from single 13–50 year-old women (Fig. 1). The numbers are small but the pattern is consistent: 76% of these women had pro-choice attitudes, 78% who had voted with this issue in mind had voted pro-choice, and 100% who had given time or money had given it to the pro-choice cause.

How might these findings be confounded by other factors? Again, Gallup found many things other than that sex differ greatly, nationally, between pro-choice and pro-life groups. As of October 1989, they included education, income, and religion. In answering the question, "Would you like to see the Supreme Court completely overturn its *Roe vs Wade* decision?," the biggest spread was by eduction: 45% of respondents without a high school diploma agreed that *Roe vs Wade* should be overturned, compared to 35% of high school graduates, 28% who had had some college, and 23% of college graduates. Almost as big a spread was by household income: 42% of respondents in homes with incomes under $20,000 agreed that *Roe vs Wade* should be overturned, compared to 33% with incomes of $20,000–$29,999, 28% with incomes of $30,000–$49,999, and just 24% with incomes of $50,000 or more. Last, religion mattered least. Catholics agreed that *Roe vs Wade* should be

Table 5. Characteristics of Women at Risk vs Everybody Else

	Single 13–50 Year-Old Women			Everybody Else		
	$\bar{X}$	S.D.	N	$\bar{X}$	S.D.	N
Income	$24,917	$25,817	36	$45,341	$35,610	361
		$t = 3.353, p = 0.0004$				
Education	3.023	1.171	44	2.539	1.228	427
		$t = -2.501, p = 0.0063$				

Throughout, women "at risk" refers to single, 13–50 year-old women. Income refers to "household income," education is scaled from 1 (least) to 5 (most), as defined in Table 1. All p values are associated with one-tailed t tests throughout.

overturned 39% of the time; Protestants agreed 34% of the time (*Gallup Reports*, October 1989).

Can education, income, and religion explain the differences here between women at risk of an unplanned conception and everybody else? Apparently not. Compared to the 44 single, 13–50 year-old women in the sample, the other 427 respondents had similar religious beliefs. Of the 44 women at risk, 56% were Protestant, 28% were Catholic, and 16% were neither; of the other 427 respondents, 49% were Protestant, 26% were Catholic, and 24% were neither. The two groups did differ significantly with respect to income; but in this case the women at risk, who were relatively pro-choice, were significantly *poorer* than the rest of the sample, which was relatively pro-life (Table 5). This is the opposite of Gallup's national trend. And the two groups differed significantly with respect to education; women at risk had spent significantly more years in school than other women and men (Table 5). This is consistent with Gallup's national trend. Other evidence, though, suggests that education alone may not explain the tendency of women at risk to be more pro-choice. Whether the question was on attitudes, voting, or gifts, women at risk who were pro-choice tended to be *less* educated than women at risk who were pro-life, though none of these differences was statistically significant (Table 6). And among women at risk in-

Table 6. Characteristics of Pro-Choice vs Pro-Life Women at Risk

	Income			Education		
	$\bar{X}$	S.D.	N	$\bar{X}$	S.D.	N
Attitudes						
Pro-choice	$25,500	$28,023	28	3.031	1.150	32
Pro-life	$17,571	$9,199	7	3.182	1.168	11
	$t = 0.731, p = 0.2348$			$t = 0.373, p = 0.3555$		
Votes						
Pro-choice	$18,588	$12,942	17	3.278	0.958	18
Pro-life	$45,000	$50,662	4	3.714	1.113	7
	$t = 2.033, p = 0.0281$			$t = 0.979, p = 0.1688$		
Gifts						
Pro-choice	$23,875	$12,900	8	3.625	1.188	8
Pro-life	$120,000	—	1	5	—	1

come tended overall to be *lower,* rather than higher, among those with a pro-choice stance (Table 6). These are, again, contrary to the national trends.

PART II: FAMILIES VS FAMILIES

Marital status, then, does predict pro-choice or pro-life stance among women. Why doesn't age? Why, again, aren't postmenopausal women, no longer at risk themselves of an unplanned conception, less pro-choice than 13–50 year-old women? And why doesn't sex? Why does this survey, like national surveys, show that women overall are no more pro-choice than men?

Part of the answer may be that we reproduce both directly and through our families. The fact that nepotism is common in nature was a conundrum to Darwin; Hamilton solved it in 1964. Both females and males can spread their genes by caring for their own young, and for other kin (Darwin 1859; Hamilton 1964). And the general rule for any allocation of life effort should hold: parental effort should be spent on kin wherever the genetic payoff per unit cost is greater than it would be if spent on one's own young.

Since Hamilton's 1964 formulation, many studies have shown that nepotism is common among many organisms. Kin tend to share food, direct care, and protection more often (reviews in Daly and Wilson 1983; Trivers 1985; Alcock 1989). In some cases at least, for instance among insects and birds, those kinds of nepotism may translate into more direct reproduction (e.g., Clutton-Brock 1988).

Again, humans are no exception. People have been shown to share food, labor, and other gifts according to relatedness (Kaplan, Hill, Hurtado, and Hawkes 1984; Kaplan and Hill 1985; Leibowitz, Eisen, and Chow 1985; Betzig and Turke 1986; Betzig 1988b on food; Hawkes 1983; Hames 1987; Berté 1988 on labor; Essock-Vitale and McGuire 1980, 1985, 1988 on gifts); they have been shown to care more for their kinsmen's and kinswomen's children (Hames 1979, 1988; Silk 1980; Betzig 1988c; Betzig, Harrigan, and Turke 1989; Betzig and Turke 1991); they have even been shown to lie on behalf of their kin more often (Fredlund 1984). On the other hand, people are less likely to neglect, abuse, or kill their kin (Chagnon and Bugos 1979; Daly and Wilson 1981, 1988; Lenington 1981; Lightcap, Kurland, and Burgress 1981; Flinn 1988). Perhaps as a result, people with more grown kin have been shown to have more children (Chagnon 1982; Faux and Miller 1984; Turke and Betzig 1985; Turke 1988; Betzig, Harrigan, and Turke 1989; Flinn 1986, 1990; Hewlett 1988).

In other words, kin tend to share reproductive concerns. The costs of raising a child, in modern as well as in traditional cultures, tend to be borne not just by the parents themselves but, to some extent at least, by their own parents, grandparents, siblings, and other close kin. In the absence of a responsible father—the one condition under which, the evidence suggests,

women are most likely to practice abortion—the costs of bringing up a baby are likely to fall even more heavily on the mother's kin. At the same time, the payoff to them may be lower. This is for at least two reasons: the child itself might suffer in the absence of a father, and the unwed mother's prospects of successfully bearing and rearing other children in the future might suffer as well (see Borgerhoff Mulder 1988 and Low 1991).

What, on the other hand, of the irresponsible father's family? Here, again, the conflict between the sexes is amplified to include kin. Just as an unwed mother's family will share her greater parenting costs, a deserting father's family will share his much diminished costs, often no costs at all. At the same time, the genetic payoff to both groups of kin will be the same. The father's kin, then, stand little or nothing to lose, and something to gain, reproductively, by preventing the unwed mother from ending her pregnancy. None of these deliberations has, of course, to be conscious; and all of them may be more effective if they are not (e.g., Alexander 1975, 1987; Trivers 1985).

These considerations prompt the following predictions. People whose families include more women "at risk" of an unwanted pregnancy—that is, more single, 13–50 year-old sisters, daughters, and granddaughters—will be more pro-choice. At the same time, people whose families include more men "at risk" fathering an unwanted child—that is, more adult men, whether they are married or unmarried, young or old—will be more pro-life. Married men are included here because they are as capable as single men of conceiving a child for whom they will not care; men over 50 are included, of course, because menopause is a female phenomenon.

Methods

Demographic background collected at the end of the telephone survey included detailed information on families. Respondents were asked the age and marital status of every one of their living sisters and brothers, daughters and sons, and granddaughters and grandsons. This information was used to determine, for each respondent, the number of female and make kin "at risk" of conceiving an unwanted child.

Results

Pro-choice attitudes, voting patterns, and time and money contributions do in fact tend to increase with the number of a respondent's single, 13–50 year-old female kin (Table 7). Results are strongest for sisters and weakest for daughters, though none of these results is statistically significant. Interestingly, the number of adult brothers, sons, and grandsons has a stronger effect in the opposite direction (Table 8). For male kin most closely related, brothers and sons, almost all the results are statistically significant. Both results overall are consistent with the predictions.

Table 7. Effects of Female Kin "At Risk"

	Number of Sisters "At Risk"			Number of Daughters "At Risk"			Number of Granddaughters "At Risk"		
	$\bar{X}$	S.D.	N	$\bar{X}$	S.D.	N	$\bar{X}$	S.D.	N
Attitudes									
Pro-choice	0.393	0.654	267	0.247	0.554	267	0.094	0.478	267
Pro-life	0.305	0.629	177	0.273	0.618	176	0.047	0.237	172
	$t = 1.413, p = 0.0792$			$t = -0.453, p = 0.3254$			$t = 1.202, p = 0.1150$		
Votes									
Pro-choice	0.374	0.655	115	0.261	0.548	115	0.017	0.131	115
Pro-life	0.288	0.627	66	0.333	0.709	66	0.031	0.175	64
	$t = 0.864, p = 0.1944$			$t = -0.768, p = 0.2218$			$t = -0.598, p = 0.2751$		
Gifts									
Pro-choice	0.347	0.688	75	0.320	0.640	75	0.093	0.498	75
Pro-life	0.283	0.655	46	0.304	0.553	46	0.065	0.250	46
	$t = 0.506, p = 0.3068$			$t = 0.137, p = 0.4455$			$t = 0.356, p = 0.3612$		

Strongest results come from taking both male and female kin "at risk" into account. Obviously, the effects of having single, 13–50 year-old female kin will be countered by the effects of having male kin over age 13. The number of female kin "at risk" can, then, be subtracted from the number of male kin "at risk" for each respondent. In this case, results are most consistent with the predictions (Table 9). Whether the question concerned attitudes, voting, or time and money gifts, all results are statistically significant for both collateral kin—sisters and brothers, and for first generation descendants—daughters and sons. Results on second generation descendants, grandchildren, tend again to be in the predicted direction.

Last, all close kin can be taken into account at once. When all female kin "at risk" are subtracted from all male kin "at risk" for each respondent, results are consistently statistically significant (Fig. 2).

How much are these results confounded by education, income, and religion? Religion shows the most interesting pattern. Altogether, 279 respondents had more male than female kin "at risk" of an unplanned conception, that is, more adult brothers, sons, and grandsons than single, 13–

Table 8. Effects of Male Kin "At Risk"

	Number of Brothers "At Risk"			Number of Sons "At Risk"			Number of Grandsons "At Risk"		
	$\bar{X}$	S.D.	N	$\bar{X}$	S.D.	N	$\bar{X}$	S.D.	N
Attitudes									
Pro-choice	1.142	1.148	267	0.393	0.760	267	0.109	0.491	266
Pro-life	1.486	1.382	177	0.653	1.090	176	0.099	0.428	172
	$t = -2.843, p = 0.0023$			$t = -2.959, p = 0.0016$			$t = 0.223, p = 0.4119$		
Votes									
Pro-choice	1.339	1.263	115	0.348	0.689	115	0.017	0.131	115
Pro-life	1.652	1.452	66	0.697	1.136	66	0.092	0.341	65
	$t = -1.516, p = 0.0657$			$t = -2.575, p = 0.0054$			$t = -2.100, p = 0.0186$		
Gifts									
Pro-choice	1.173	1.075	75	0.507	0.891	75	0.067	0.300	75
Pro-life	1.935	1.665	46	0.913	1.226	46	0.089	0.288	45
	$t = -3.079, p = 0.0013$			$t = -2.105, p = 0.0187$			$t = -0.399, p = 0.3454$		

Table 9. Effects of Male-Female Kin "At Risk"

	Number of Brothers-Sisters "At Risk"			Number of Daughters-Sons "At Risk"			Number of Granddaughters-Grandsons "At Risk"		
	$\bar{X}$	S.D.	N	$\bar{X}$	S.D.	N	$\bar{X}$	S.D.	N
Attitudes									
Pro-choice	0.749	1.335	267	0.146	0.821	267	0.015	0.476	266
Pro-life	1.181	1.497	177	0.381	0.180	176	0.047	0.374	270
	$t = -3.178, p = 0.0008$			$t = -2.468, p = 0.0070$			$t = -0.743, p = 0.2289$		
Votes									
Pro-choice	0.965	1.457	115	0.087	0.767	115	0	0	115
Pro-life	1.364	1.604	66	0.365	1.322	66	0.131	0.175	64
	$t = -1.707, p = 0.0448$			$t = -1.775, p = 0.0388$			$t = -1.915, p = 0.0285$		
Gifts									
Pro-choice	0.827	1.298	75	0.187	0.926	75	−0.27	0.434	75
Pro-life	1.652	1.754	46	0.609	1.256	46	0.044	0.208	45
	$t = -2.964, p = 0.0019$			$t = -2.121, p = 0.0180$			$t = -1.029, p = 0.1528$		

50 year-old sisters, daughters, and granddaughters; 114 respondents had equal numbers of male and female kin "at risk," and another 70 had more female than male kin "at risk." Of those with more male kin at risk, versus those with more female kin at risk, being protestant or Catholic had no effect: 55% of respondents with more male kin at risk were protestant, and 24% were Catholic; 26% of respondents with more female kin at risk were protestant, and 10% were Catholic. The ratios of protestants to Catholics in each

FIGURE 2. Total number of male less total number of female kin "at risk" for pro-choice (dark bars) vs pro-life (speckled bars) respondants. Means, for pro-choice:pro-life respondants, are: 0.914:1.553 on attitudes; 1.052:1.734 on votes, 0.987:2.111 on gifts. Standard deviations are: 1.710:1.952 on attitudes, 1.761:2.248 on votes, 1.759:1.874 on gifts. Numbers of respondants are: 266:170 on attitudes, 115:64 on votes, 75:45 on gifts. Statistics are: $t = -3.601$, $p = 0.0002$ on attitudes, $t = -2.245$, $p = 0.0130$ on votes, and $t = -3.308$, $p = 0.0006$ on gifts.

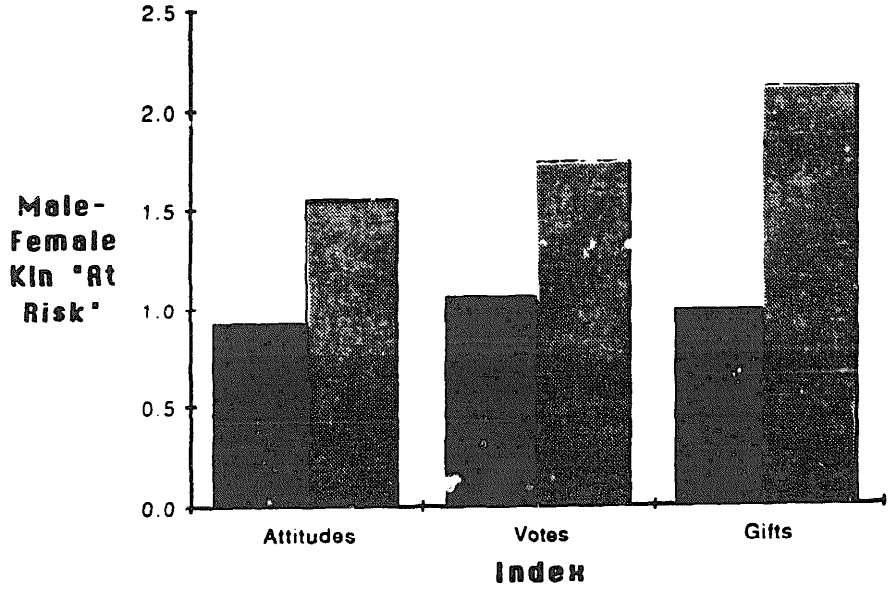

Table 10. Characteristics of All Respondants According to Family Composition

	Number of Brothers + Sons + Grandsons "At Risk"- -Number of Sisters + Daughters + Granddaughters "At Risk"											
	−3	−2	−1	0	1	2	3	4	5	6	7	8
Income (in K)												
X	93	53.19	35	42.19	39.9	48.79	47.48	43.06	47.89	33	53.75	75
S.D.	73.98	29.89	27.46	25.54	25.89	52.71	51.36	21.16	29.83	20.0	14.93	—
N	4	16	40	101	97	70	29	18	9	5	4	1
	ANOVA: $F = 1.486$, $p = 0.1340$											
Education (1–5)												
X	3.5	2.412	2.633	2.763	2.798	2.59	2.421	1.84	1.7	2	1.714	3
S.D.	1	1.278	1.167	1.177	1.377	1.133	1.177	1.028	0.675	1.095	0.756	—
N	4	17	49	114	114	78	38	26	10	6	7	1
	ANOVA: $F = 2.692$, $p = 0.0023$											

case is roughly the same. The remarkable difference comes in ratios of Christians to non-Christians. Of respondents with more male kin at risk, 79% were Christians, and only 21% were not. Of respondents with more female kin at risk, just 36% were Christians, and a whopping 64% were not. This is a highly significant difference ($X^2 = 76.691$, $p < 0.0001$). Evidently, women in Christian families are less likely to delay marriage than women in non-Christian families.

Education is a common reason why women put marriage off; it might be expected, then, to correlate with religion. In this sample, Christians were significantly less educated than non-Christians ($t = 5.983$, d.f. $= 462$, $p < 0.0001$). But education alone is a much weaker predictor of respondents' family composition than religion, even though respondents with more female kin at risk are significantly more educated than those with more male kin at risk (Table 10).

Finally, income is neither a good predictor of a respondent's likelihood of being a Christian or non-Christian ($t = 0.106$, d.f. $= 291$, $p = 0.4577$), or of a respondent's family composition (Table 10). People with more male kin over age 13 are neither richer or poorer, on average, than those with more single, 13–50 year-old female kin.

PART III: POLICY

It may be interesting to consider some possible effects of demography on policy. Over the past thirty years, the period for which data are available from the *Statistical Abstracts* (1990), the proportion of the U.S. population made up of never-married, 20–44 year-old women rose dramatically. This was partly because the proportion of young adults went up slightly, and more importantly because of shifts toward later ages at first marriage. The point here is that the onset of the steepest increase coincides with *Roe vs Wade* (Figure 3). It seems possible, at least, that as the number of women "at risk" of an unplanned conception, along with the number of their kin, increased, courts might have been less tolerant of anti-abortion legislation.

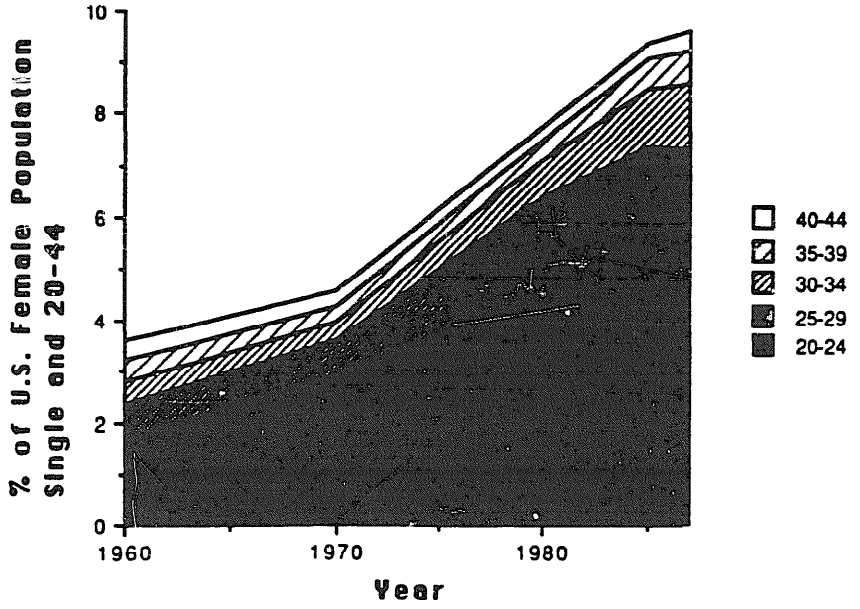

FIGURE 3. Percent of U.S. female population made up of never married, 20–44 year-old women. Source: *Statistical Abstracts*, 1990, Tables 13 and 52.

Perhaps even more suggestive are correlations between proportions of female population "at risk" and state abortion legislation. In any population, the number of single, reproductive-aged women is likely to be a small minority with a relatively minor effect on voting, legislation, and adjudication. But the number of siblings, parents, and grandparents who share their interests may swell that minority substantially, perhaps with relatively important effects on policy.

Before and since 1973 separate states have proposed and passed pro- and anti-abortion legislation. The most liberal seems to have come from states with relatively high proportions of single, reproductive-aged women. New York's pioneering legalization of abortions in 1970 may be a case in point; as of the 1980 census, the most recent published, the proportion of New York's population made up of unmarried women from 15 to 50 was all of 10.17%, second highest in the U.S. (*1980 Census of Population*, Chapter D, Table 205). More restrictive laws, on the other hand, may be more likely in states with relatively small proportions of single young women.

NARAL, the National Abortion Rights Action League, has for the past two years published "Who Decides?," a state-by-state review of state governors' and legislatures' attitudes on abortion, and of actual abortion legislation. Quite strikingly, each of these indices correlates with state demographics, as might be expected. States in which governors' attitudes, legislatures' attitudes, and existing abortion legislation are pro-choice are states in which higher proportions of the population are made up of single, reproductive-aged, women (see Table 11).

Take, for instance, governors' positions on abortion. The January 1991,

Table 11. Policy by State: Abortion legislation, Governors' and Legislatures' Positions on Abortion, and Proportion of Single, 15–50 year-old Women in the State Population. Scores are Defined in Text and in Tables 12–16

State	Proportion of Single, 15–50 Year-Old Women in the Population	Governor's Positions	Legislative Positions	Governors and Legislators Positions	Consent Legislation	Medicaid Legislation
AL	7.48	2	5	5	3	3
AK	7.61	2	1	3	2	1
AZ	7.74	1	1	1	2	3
AR	6.51	1	5	3	3	3
CA	8.86	1	1	1	2	1
CO	8.56	1	1	1	2	3
CT	9.35	1	1	1	1	1
DE	9.40	1	2	2	2	3
FL	7.24	1	1	1	2	3
GA	7.96	1	1	1	2	3
HI	9.11	—	1	—	1	1
ID	6.33	2	3	4	2	2
IL	8.88	1	3	2	2	3
IN	7.65	1	4	3	3	3
IA	7.67	2	2	4	1	2
KS	7.11	2	1	3	1	3
KY	6.95	2	5	5	2	3
LA	8.30	2	5	5	3	3
ME	7.69	1	1	1	1	3
MD	9.56	1	1	1	2	2
MA	10.61	1	1	1	3	1
MI	8.85	2	5	5	3	3
MN	8.96	1	5	3	3	2
MS	7.89	1	5	3	2	3
MO	7.66	2	5	5	3	3
MT	7.27	2	1	3	2	3
NE	7.87	2	5	5	2	3
NV	7.36	2	4	4	2	3
NH	8.44	2	1	3	1	3
NJ	9.53	1	2	2	1	1
NM	7.97	1	1	1	2	3
NY	10.17	1	2	2	1	1
NC	7.89	2	1	3	1	1
ND	7.82	2	5	5	3	3
OH	6.16	2	5	5	3	3
OK	6.23	1	4	3	1	3
OR	7.44	1	1	1	1	1
PA	8.84	2	5	5	2	2
RI	8.70	1	4	3	3	3
SC	8.31	2	3	4	3	3
SD	7.68	2	5	5	2	3
TN	7.36	1	5	3	2	3
TX	7.35	1	3	2	1	3
UT	7.36	2	5	5	3	3
VT	9.29	1	1	1	1	1
VA	8.59	1	1	1	1	1
WA	7.77	1	1	1	2	1
WI	8.89	2	5	5	1	2
WV	6.68	2	5	5	3	1
WY	6.19	2	4	4	3	2

Sources: NARAL 1991; 1980 Census.

Note: As of 1990, the governor of Hawaii had no clear position on abortion.

Table 12. Governors' Positions on Abortion, and Proportion of Single, 15–50 Year-Old Women in Their State Populations

	$\bar{X}$	S.D.	N
Pro-choice	8.356	1.086	26
Pro-life	7.597	0.801	23
	$t = 2.756, p = 0.0041$		

publication of "Who Decides?" canvassed attitudes of governors of all 50 states. Attitudes were assessed by contacting each governor and asking for a statement of their position on abortion. These statements, which are published in "Who Decides?," are explicitly pro-life or pro-choice, and they are supplemented by information on other public statements and public actions governors have taken on abortion. As of 1990, 26 governors, a bare majority, supported legal abortion; 23 governors opposed legal abortion; while the position of the governor of Hawaii was unclear.

As Table 12 shows, states with pro-choice governors have a significantly higher proportion of single 15–50 year-old women—that is, women "at risk" of an unplanned conception, and so more likely to choose an abortion—than do states with governors whose positions are pro-life. This suggests that voters may be taking governors' abortion opinions into account, that governors may be taking their constituents' interests into account, or both.

One caution in interpreting these results must be made: there is a ten-year gap between measures of legislators' attitudes and legislation on abortion, and proportion of women at risk in the population. The NARAL information is available only for 1990; and though the last U.S. census was made in that same year, results will not be available until 1992 or later. The census used in this test, and in all tests which follow, was taken in 1980. Usually, results of these tests are sufficiently robust that they should stand up to some demographic shifts. Still, all results should be treated as provisional, pending a reanalysis based on the 1990 census.

NARAL has also assessed the attitudes of all 50 state legislators as of 1990. In this case, information from state legislators themselves, and from pro-choice and pro-life lobbyists and activists in each state, were used in making a pro-choice or pro-life characterization of each state house. "Who Decides?" also includes a list of all post-*Webster* (1989–1990) bills introduced in each legislature, and of their fates. As of 1990, in 20 states, both houses favored legal abortion; these are given a rank of "1," most pro-choice, in Table 13. In 17 states, both houses favored criminalizing abortion; these are given a rank of "5," most pro-life. In three states, both houses were closely divided; in another state, one house was pro-life while the other was pro-choice; all four of these states are given an intermediate rank of "3." Finally, in four states, one house favored legal abortion while the other house was closely divided: these are given a rank of "2," somewhat pro-

Table 13. Legislatures' Positions on Abortion, and Proportion of Single, 15–50 Year-Old Women in their State Populations

	Rank	$\bar{X}$	S.D.	N
Most pro-choice	1	8.303	0.927	20
Somewhat pro-choice	2	9.192	1.069	4
In-between	3	7.718	1.120	4
Somewhat pro-life	4	7.226	1.053	5
Most pro-life	5	7.721	0.856	17
		ANOVA: $F = 3.441$, $p = 0.0155$		

choice; and in the remaining five states, one house was closely divided, while the other house favored criminalizing abortion: these are given a rank of "4," somewhat pro-life.

Results are again in the expected direction (Table 13). State legislators are more pro-choice where their state population contains a higher proportion of women "at risk." Again, the result is statistically robust. And again, the reason may be that voters are taking legislators' attitudes toward abortion into account, that legislators are taking their constituents' interests into account, or both.

Last, governors' and legislators' positions on abortion can both be taken into account. In Table 14, a rank of "1," most pro-choice, is assigned the 14 states in which governors and members of both houses favored legal abortion; a rank of "5," most pro-life, is assigned the 13 states in which governors and members of both houses favored criminalizing abortion. An intermediate rank of "3" is assigned the five states in which both houses were pro-choice while the governor was pro-life, four states in which both houses were pro-life while the governor was pro-choice, plus three states in which one house was closely divided, the other house opposed legal abortion, and the governor favored legal abortion, plus one state in which one house was closely divided, the other house favored legal abortion, and the governor was pro-life. A rank of "2," somewhat pro-choice, is assigned three states in which one house supported keeping abortion legal, the other house was closely divided, and the governor also favored legal abortion, plus two states in which both houses were closely divided while the governor was pro-choice. Finally, a rank of "4," somewhat pro-life, is assigned one

Table 14. Governors and Legislatures' Combined Positions on Abortion, and Proportion of Single, 15–50 Year-Old Women in their State Populations

	Rank	$\bar{X}$	S.D	N
Most pro-choice	1	8.474	0.965	14
Somewhat pro-choice	2	9.066	1.064	5
In-between	3	7.638	0.785	13
Somewhat pro-life	4	7.048	0.990	4
Most pro-life	5	7.734	0.845	13
		ANOVA: $F = 4.668$, $p = 0.0032$		

Table 15. State Laws Requiring Parental Consent for Minors' Abortions, and Proportion of Single, 15–50 Year-Old Women in the State Population

	Rank	$\bar{X}$	S.D.	N
Parental notice or consent not required	1	8.317	1.085	15
Parental notice or consent required	2	7.895	0.992	35
		$t = 1.338, p = 0.0936$		

state in which one house favored legal abortion, the other opposed it, and the governor also opposed it, plus two states in which one house was closely divided, the other opposed legal abortion, and the governor also opposed it. Because Hawaii's governor was undecided in 1990, that state is again left out of the analysis.

In this case, the results are most statistically significant (Table 14). The combined effect of governors' and legislators' positions on abortion bears the closest relationship to the proportion of single, 15–50 year-old women in a state's population.

Most important, though, is the fact that legislation itself seems to track the state population "at risk." Two of the most prevalent state laws on abortion are those which require minors to get their parents' consent before they are legally allowed to end their pregnancies, and those which restrict the availability of Medicaid funding for abortion to special conditions. As of 1990, 35 states had laws on the books that would keep minors from having legal abortions without parental notice or consent. As Table 15 shows, the proportion of single women from age 15–50 in the minority of states which *does not* require such consent is higher, though not significantly higher, than the proportion of women at risk in consent-requiring states.

The correlation between demography and policy on the Medicaid issue is clearer. As of 1990, 30 states would not provide Medicaid funding for abortions unless the mother's life was in danger; these were given the most pro-life rank of "3" in Table 16. In another eight states, Medicaid funding would be provided in additional, limited circumstances, such as incest or rape; these states were given the intermediate rank of "2." And in the remaining minority of just 12 states, Medicaid funding was available for most or all abortions; these were given the most pro-choice rank of "1." As Table

Table 16. State Laws on Medicaid Funding for Abortions, and Proportion of Single, 15–50 Year-Old Women in the State Population

	Rank	$\bar{X}$	S.D.	N
No restrictions on funding	1	8.693	1.200	12
Funds for incest, rape, or other extenuating circumstances	2	8.129	1.267	8
Funds only when the mother's life is in danger	3	7.725	0.757	30
		ANOVA: $F = 4.375, p = 0.0181$		

16 shows, the percent of the female population at risk is significantly higher in states with fewer restrictions on Medicaid funding for abortion.

IV: CONCLUSIONS

Since *Roe vs Wade*, there has been enormous debate about abortion. It has been confined, almost exclusively, to the issue of "morality." There has been a great deal of argument, for example, about "the morality of destroying potential persons," and concern that "the moral status of the embryo has always been ambiguous" (see Tooley 1983 and Luker 1984, respectively). It seems ironic that, to many moralists, the mother has a moral obligation to provide for a child, but the father has not. This asymmetric obligation is an undeniable effect of criminalizing abortion.

Nevertheless, men have consistently favored legal abortion at least as often as women. This study offers two explanations. First, not all women are at risk of an unplanned conception. Women of reproductive age, especially unmarried women, are much more likely to be pro-choice than the rest of the population. Second, people, like other organisms, can reproduce both directly and through their kin. People whose closest kin include more single, reproductive-aged women than reproductive-aged men tend to favor abortion significantly more often than people whose families include more reproductive-aged men than single, reproductive-aged women.

Demography, then, appears to affect attitudes and practices on abortion. Interestingly enough, it appears to affect politicians' attitudes and, more importantly, policy as well. Across the 50 states, governors' positions on abortion, legislators' positions on abortion, and abortion legislation are all more pro-choice as the proportion of single, reproductive-aged women in the state population goes up. This might, again, be because voters are taking governors' and legislators' positions into account, or because lawmakers are sensitive to their constituents' interests, or both.

Although these differences are significant, it is important to stress that overall men's and women's interests intersect more often than they conflict. Most human matings are the result of choice on both parts. It is consistent that, again, both women and men are more likely to favor than to oppose legal abortion. That's true whether they are just voicing an opinion, voting for a pro-choice or a pro-life candidate, or giving money or time to a pro- or anti-abortion cause. It is consistent, too, that state politicians—most of them men—are at least as likely to favor as to oppose legal abortions.

We'd like to end with a short editorial. We've used the convenient shorthand "pro-choice" and "pro-life" throughout to represent positions favoring and opposing legal abortion. Both, though, are weighted with rhetoric, and neither is completely accurate. "Pro-choice" is a misnomer because, in a way, pro-life advocates are more pro-choice on this issue than anybody else. If women's choices *before* conception were never in error, if

they were never deceived or forced into having sex with a man unwilling or unable to care for a baby, or under conditions otherwise unfavorable to raising one, then there should be little or no demand for legal abortion. We find the "pro-life" label even more of a misnomer. If people, like other organisms, have evolved by natural selection in order to maximize reproduction, then the *only* reason we should expect them to prefer abortion is when the benefits of raising a particular child are outweighed by the costs it would inflict on other children. Those children might already have been born; or they might be born later under better conditions. A great deal of evidence on child care, child abuse, and child neglect is consistent with this. This results of this study are, also.

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