Of Doctors, Deterrence, and the Dark Figure of Crime—A Note on Abortion in Hawaii*

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The current controversy about abortion involves two very different kinds of issues. First, there are arguments about the morality of abortion and its prohibition. Second, there are questions of fact about the extent to which criminal law regulation has an impact on the rate of abortions and other incidents of social life. These ethical and empirical issues are distinct: the morality of criminal law restrictions on abortion is independent of the degree to which such laws are effective. Still, the extent to which law changes behavior in this area is of interest to scholars and legislators and the subject of heated debate.

In the United States, legal regulation of abortion has traditionally been a matter of individual state policy, but until recently all states prohibited abortion except in narrowly defined situations. Recent legislation in a number of states has, however, made medical abortion available to greater numbers of pregnant women—in some states to all women who can afford the operation.³ In March, 1970, Hawaii's law

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¹ The two issues are often confused in discussions of victimless or "folk" crime. See Zimring & Hawkins, The Legal Threat as an Instrument of Social Change, 27 J. Soc. Issues 33, 35 (1971).

² Compare H. Packer, The Limits of the Criminal Sanction 342-47 (1968) with Andenaes, Deterrence and Specific Offenses, 38 U. Chi. L. Rev. 537, 542-46 (1971).

³ Since 1967, a number of states have enacted statutes, patterned after Model Penal Code § 230.3(2) (Proposed Official Draft 1962). See, e.g., Cal. Health and Safety Code § 25950-55.5 (West Supp. 1972). While these laws permit abortion only if specified conditions, such as a serious threat to the mother's mental or physical health, obtain, large numbers of abortions have been performed in the jurisdictions that have enacted them. Some one hundred sixteen thousand abortions were performed in California during 1971, for example. Chicago Daily News, Aug. 11, 1972, at 6, col. 4.

In 1970, four states enacted statutes that remove the criminal sanction from abortion without requiring grounds for the operation. Alas. Stat. Ann. § 11.15.060 (1970); Hawaii Rev. Laws § 768 (1970); N.Y. Penal Law § 125.05(3) (McKinney Supp. 1972); Wash. Rev. Code Ann. §§ 9.02.060-.090 (Supp. 1971). At the same time that legislative change was gathering momentum, there were a number of successful constitutional challenges

prohibiting abortion except when necessary to save maternal life was replaced by a law specifically allowing in-hospital abortion for state residents during the first several months of pregnancy.4 Such a radical change in legal policy presents a rare opportunity to study the impact of a change in the law. And whatever the merits of allowing only state residents to receive abortions and of requiring that abortions be performed in hospitals, these restrictions make it easier to count legal abortions and to relate the state's abortion rate to its birth rate.5

This article presents preliminary data on the effect of the decriminalization of abortion in the state of Hawaii. First, it addresses two empirical tasks: (1) describing the number and known characteristics of abortions performed in Hawaii during the first year of the new law; and (2) estimating the number of abortions performed on Hawaiian citizens before the law was changed. The remainder of the article discusses ways in which these data can contribute to our knowledge of the "dark figure" of criminal abortion in the United States and the larger issue of the impact of criminal law on behavior.

I. Abortion in Hawaii: The First Year

A state-sponsored University of Hawaii study group has attempted to gather data concerning each abortion performed in Hawaii during

to criminal laws restricting abortion. See, e.g., Babbitz v. McCann, 310 F. Supp. 293 (E.D. Wis. 1970); Doe v. Bolton, 319 F. Supp. 1048 (N.D. Ga. 1970), review granted, 402 U.S. 941 (1971).

⁴ The old law, Hawaii Rev. Laws §§ 768-6 to -7 (1968), provided:

Whoever maliciously, without lawful justification, administers, or causes or procures whoever maliciously, without lawful justification, administers, or causes or procures to be administered any poison or noxious thing to a woman when with child, in order to produce her miscarriage, or maliciously uses any instrument or other means with like intent, shall, if the woman is then quick with child, be fined not more than \$1,000 and imprisoned at hard labor not more than five years; and if she is theu not quick with child, shall be fined not more than \$500 and imprisoned at hard labor not more than two years. . . . Where means of causing abortion are used for the purpose of saving the life of the woman, the surgeon or other person using such means is lawfully justified. is lawfully justified.

The new statute, Act of Mar. 11, 1970, ch. 768, §§ 1-4, Hawaii Laws 1 (1970), provides:

⁽a) No abortion shall be performed in this State unless: (1) Such abortion is performed by a licensed physician or surgeon, or by a licensed osteopathic physician and surgeon; and (2) Such abortion is performed in a hospital licensed by the department of health or operated by the federal government or an agency thereof; and (3) The woman upon whom such abortion is to be performed is domiciled in this State or has been physically present in this State for at least ninety days immediately preceding such abortion. The affidavit of such a woman shall be prima facie evidence of compliance with this requirement.

(b) Abortion shall mean an operation to intentionally terminate the pregnancy of a non-viable fetus. The termination of a pregnancy of a viable fetus is not included in this Act.

⁽c) Any person who knowingly violates this section shall be fined not more than \$1,000 or imprisoned not more than five years, or both.

⁵ See R. Smith, M. Diamond, P. Steinhoff, & J. Palmore, Jr., Abortion in Hawaii: THE FIRST YEAR, REPORT TO THE LEGISLATURE, STATE OF HAWAII (1972) [hereinafter cited as REPORT TO THE LEGISLATURE].

the year following the change in the law.⁶ Data on legal abortion are nearly complete because the Hawaiian statute requires women to sign affidavits of residency and to check into a hospital in order to qualify for a lawful abortion.⁷ As Table 1 shows, there were 3,643 lawful abortions performed during the first year. The ratio of abortions to live births was approximately 1 to 4.5 during the period the abortions would have come to full term.

TABLE 1
ABORTIONS AND LIVE BIRTHS IN HAWAII

Abortions (Mar. 13, 1970– Mar. 12, 1971)	Live Births (Sept., 1970– Aug., 1971)*	Ratio	
3,643	16,226	1/4.5	

Sources: Report to the Lecislature, supra note 5, at 1 (abortions); Unpublished data provided by Hawaii Department of Health (copy on file at The University of Chicago Law Review) (live births).

* For an explanation of the selection of this year as the impact period, see note 25 infra.

Hospitals and law enforcement personnel, however, do not ordinarily investigate the facts alleged in the affidavits of residence before performing operations. This raises the possibility that the proportion of abortions to births may be artificially inflated by abortions performed on nonresidents. In order to correct for this possibility, a sample of abortion cases was searched through telephone directories to confirm residence. This audit showed that 23 percent of all Caucasian women and virtually none of the women of other ethnic backgrounds were possible or probable nonresidents. Subtracting all possible nonresidents from the abortion census results in an estimated total of 3,250 lawful abortions, or I abortion for every 5.1 births. This figure is prob-

⁹ The audit of March-June, 1970, abortions produces the following contrast in percent resident:

	Caucasians	Others
Resident	58	68
Possible Resident	19	30
Possible Nonresident	11	2
Probable Nonresident	11	1
	100% (105)	100% (97)

⁶ In addition to collecting hospital data on abortions, the group administered a questionnaire to most of Hawaii's first abortion patients and a sample of maternity cases. Data from these questionnaires are now being analyzed.

⁷ Act of Mar. 11, 1970, ch. 768, §§ 1-4, Hawaii Laws 1 (1970).

⁸ Two patient "audits" were conducted. The first surveyed one-fifth of the patients during the first three months of the new law. The second covered the same period a year later. In order to protect the privacy of the patients, no names appear in the records of the audit.

ably conservative, however, since some residents may have been excluded and some births are attributable to nonresidents. The true ratio is, therefore, somewhere between 1 to 4.5 and 1 to 5.1.

Table 2 compares the ethnic backgrounds of abortion patients, adjusted for the Caucasian nonresidents, with those of new mothers during 1970–71. According to these data, Hawaiian and part-Hawaiian women are underrepresented among abortion patients, and Caucasian, Japanese, and Chinese women are most likely to have abortions.

TABLE 2
PERCENTAGE DISTRIBUTION OF ABORTIONS AND LIVE BIRTHS
BY ETHNICITY OF MOTHER AND PATIENT

	Abortions (First year)	Live Births (Sept., 1970–Aug., 1971 impact period)**	Estimated Ratio: Abortions/Births
Caucasian	44*	35	1/5
Chinese and Japanese	28	21	1/4
Hawaiian and Part-Hawaiian	11	21	1/11
Other	18	23	1/7
	100% (3455)	100%	

Sources: Report to the Legislature, supra note 5, at 16 (abortions); Unpublished data provided by Hawaii Department of Health (copy on file at The University of Chicago Law Review) (live births).

- * In order to approximate resident abortion rates, 11.5 percent of the Caucasian abortions, the probable nonresidents, was subtracted from the numbers presented in the Report to the Legislature. See note 9 supra. The inclusion of all such operations would increase the total number of abortions from 3,455 to 3,643 and the Caucasian percentage from 44 to 47.
- ** Abortions are compared to live births to approximate the rate of abortions per 100 conceptions. The relevant comparison, therefore, is between abortions performed during the period when the aborted fetuses would have come to full term. See note 25 infra. The latter is the impact year of September, 1970-August, 1971.

Abortion patients are more likely than new mothers to be single, as Table 3 shows. Abortion patients are fifteen times more likely to have been unmarried at the time of conception than are mothers when they give birth. The two categories are not directly comparable, however, since women may marry between conception and birth, especially when legitimacy is at stake. ¹⁰ But it is clear on present evidence that when

¹⁰ In one study about 15 percent of the sample of premarital conceptions among white females resulted in live births after marriage. P. Gebhard, W. Pomeroy, C. Martin, & C. Christenson, Pregnancy, Birth, and Abortion 12 (1958). A large percentage of the women in the sample who reported conceptions while single, however, were also single when the pregnancy ended, so the percentage of marriages for all women who conceive

TABLE 3
PERCENTAGE DISTRIBUTION OF ABORTION PATIENTS AND MOTHERS BY
MARITAL STATUS AT TIME OF OPERATION OR BIRTH

	Abortions (First year)	Live Births (1970–71 impact year)	Estimated Ratio
Single	54	9	1.5/1
Married	36	91	1/10
Separated, Widowed, or Divorced	9		unknown
	100% (3455)	100% (16,223)	

Sources: Report to the Legislature, supra note 5, at 14 (abortions); Unpublished data provided by Hawaii Department of Health (copy on file at The University of Chicago Law Review) (live births).

single women conceive, they resort to abortion at a grossly disproportionate rate.

It is interesting to compare the profile of lawful abortions in Hawaii to figures gathered from other societies that have permitted or encouraged abortion. In Japan, one survey showed approximately 60 registered induced abortions for every 100 live births.¹¹ In Hungary, according to Professor Tietze, the number of abortions in 1964 exceeded the number of live births by 40 percent.¹² Perhaps the most dramatic time series on abortion and birth rates is that in Rumania, where abortion on demand was legalized in 1957. As described by Professor Andenaes: "The birth rate had declined from 24.2 per thousand in 1956 to 14.3 per thousand in 1966. It is estimated that the number of abortions in 1966 was four times the number of live births." In the first year after the permissive law was repealed, the birth rate in Rumania nearly doubled, increasing from 14.3 per thousand in 1966 to 27.3 per thousand in 1967.¹⁴

The contrast between Hawaii's first year of legalized abortion and the experiences in central Europe and Japan may reflect the difference between the short-run and long-run impact of elective abortion, as well as differences in population pressures, cultures, and economic conditions. But whatever the reasons for this contrast, it is clear that compari-

out of wedlock is probably higher. See id. at 16-17. "An estimated one-quarter to one-third of contemporary urban marriages involve a premarital pregnancy." N. LEE, THE SEARCH FOR AN ABORTIONIST 151 (1969).

¹¹ C. Foote, R. Levy & F. Sander, Cases and Materials on Family Law 596 (1966).

¹² Tietze, Abortion in Europe, 57 Am. J. Pub. Health 1923, 1930 (1967).

¹³ Andenaes, supra note 2, at 544.

¹⁴ Id.

sons with foreign experience may have led some observers to overestimate the immediate demand for abortions.¹⁵

The contrast between foreign and Hawaiian abortion demand is qualitative as well as quantitative. An abortion rate approaching the rate of births reflects the use of abortion principally as a means for limiting family size. The fact that first-year demand in Hawaii was lower and concentrated among single women suggests that motives other than, and apparently stronger than, family limitation animated the majority of abortion requests. Table 4 shows that this special qualitative nature of abortion in Hawaii remained constant during the first year.

TABLE 4
ABORTIONS BY AVERAGE NUMBER PER DAY AND PERCENTAGE OF
PATIENTS SINGLE: HAWAII, FIRST YEAR

	Mar. 13–31, 1970	AprJune, 1970	July-Sept., 1970	OctNov., 1970	Jan.–Mar. 12, 1971
Abortions per Day	8.3	9.4	10.5	9.6	10.9
Percentage Single Patients	63	57	51	54	55

SOURCE: Unpublished data provided by Roy G. Smith, M.D., Associate Professor of Maternal and Child Health, University of Hawaii (copy on file at *The University of Chicago Law Review*).

Of course, the pattern of abortions within a single year cannot be made to simulate a long-range trend. No matter how they are subdivided, these data are an inadequate basis upon which to predict future trends in Hawaii. The flat distribution throughout the year and the heavy publicity that the new law received do suggest, however, that the level and special quality of the abortion rate was not the product of an initial lack of information about the law.¹⁶

Toward a Dark Figure of Abortions

Because abortion is a victimless crime, in the sense that there is no surviving victim to inform the authorities, there are few data on the rate of abortion in jurisdictions where the procedure is illegal. The rate of abortion is, however, related to a readily accessible statistic—the birth rate. And by studying changes in the birth rate in jurisdictions

¹⁵ Id. at 543, 545. Andenaes's examples all involve countries where the presence or absence of criminal prohibition has led to very significant changes in births (Japan and Hungary) or abortions (Scandinavia). See text and notes at notes 41 & 42 infra.

¹⁶ The major newspapers in Hawaii gave extensive coverage to the legislation and early abortions, including reports of the number of abortions performed during the first months after the passage of the new law. The broadcast media devoted a good deal of attention to the new law as well.

where the law regulating abortion has been radically changed, it should be possible to gain some information concerning movements in the rate of abortion. In this sense, abortion, like drunken driving, affords an unusual opportunity to study the impact of laws governing consensual acts by examining vital statistics.¹⁷

In theory, one should be able to estimate the dark figure for abortions before the change in law from the number of births before the change, the birth rate expected had there been no change, and the number of legal abortions after the change in policy. The operating principle is that, disregarding the small and constant rate of miscarriages, pregnancy must result in either abortion or live birth. If, for example, there are 1,000 additional lawful abortions in the year following the change in the law, while the number of births in the same period is only 500 fewer than in the year before, and if there is no reason to suppose that fertility has changed, then it is reasonable to estimate that there were 500 uncounted abortions performed on citizens of that jurisdiction in the year preceding the change in the law.

The data from Hawaii offer a limited but promising approach to estimating the dark figure of abortion under Hawaii's old law. The number of lawful abortions performed under the prior legal standards was negligible in comparison to the number of live births. 18 Both the actual number of live births before and after the change in policy and the number of legal abortions after the change in policy are known. The only figure that cannot be calculated with precision is the number of births that would have resulted if the policy had not changed. One estimate of that number can be drawn, however, from the number of births in Hawaii before birth statistics were affected by the change in the law. This estimate rests on the assumption that the number of births would have remained constant if abortion policy had not changed. As Table 5 shows, there were 2,866 more abortions but only 290 fewer births during the impact period. If the base period birth rate is an accurate forecast of the impact period birth rate that Hawaii would otherwise have experienced, over 2,500, or 90 percent of the total,

¹⁷ In the case of drunk driving, the statistics used to measure the impact of laws is the number of highway deaths. See Andenaes, supra note 2, at 546-53.

¹⁸ It had been estimated that even a liberal therapeutic abortion law would legalize only a small percentage of the abortions requested. Smith, Manner & Goto, *Physicians' Attitudes on the Abortion Law*, 29 Hawah Med. J. 209, 211 (1970). Under the repealed Hawaii law, abortion was lawful only when motivated by a desire to save maternal life. Doctors reported that concern for "mother's health" motivated only 9 of 482 abortion requests. *Id.* at 210. Under the more restrictive "maternal life" standard, even fewer legal abortions would have occurred, estimated arbitrarily here at 0.5 percent of these abortions requested.

TABLE 5
ESTIMATED ABORTIONS DURING HAWAII'S FIRST TEN IMPACT MONTHS COMPARED TO LIVE BIRTHS
FOR THE IMPACT YEAR AND SAME PERIOD YEAR BEFORE

	Base Period Sept., 1969–Aug., 1970	Impact Year Sept., 1970–Aug., 1971	Difference
Live Births	16,516	16,226	-290
Estimated Abortions That Would Have Come Full Term	13*	2,879	+2,866
			+2,576

Sources: Report to the Legislature, supra note 5, at 5 (abortions); Unpublished data provided by Hawaii Department of Health (copy on file at The University of Chicago Law Review) (live births).

of the abortions performed legally under the new law would have been performed as well under the old law.

There are two indications that it is unsafe to use the actual birth rate before the abortion law was changed to estimate what the rate of births would have been if the law had not changed. First, birth rates are unstable: the average change in the rate of live births between 1970 and 1971 for all of the states was 4 percent. Second, the Hawaiian birth rate had increased by 9.6 percent between the twelve months ending in August, 1969 and the preimpact year ending in August, 1970. Second in August, 1970.

The 9.6 percent increase in the Hawaiian birth rate presents the larger problem. One wonders whether the increase would have continued had the change in abortion policy not taken place. This possibility can be tested, to some extent, by inquiring whether comparable states experienced comparable trends during the same periods. Table 6 compares Hawaii with the two pacific states where there was no significant change in abortion law between 1969 and 1970.²¹ Oregon and California exhibited birth trends similar to that of Hawaii although they did not legalize elective abortion. But this does not mean that the downturn in births in all three states can be attributed to factors other than increased abortion. In 1971, the number of legal abortions per-

^{*} Estimated at 13. See note 18 supra.

¹⁹ See NATIONAL CENTER FOR HEALTH STATISTICS, 20 MONTHLY VITAL STATISTICS REPORT, No. 12, at 4, table 1 (1972). In order to examine the degree of fluctuation, percentage changes for all states were counted as positive numbers. The mean change was +3.9 percent in live births from 1969 to 1970 and -3.9 percent from 1970 to 1971.

²⁰ See Unpublished data provided by Hawaii Department of Health (copy on file at The University of Chicago Law Review).

²¹ California changed its abortion law in 1967. See Cal. Health and Safety Code §§ 25950-55.5 (West Supp. 1972), which is incorporated by reference into Cal. Penal Code §§ 274-76 (West 1972). Oregon enacted a new law in 1971. Ore. Rev. Stat. §§ 435.405-.445 (1971).

TABLE 6
TRENDS IN LIVE BIRTHS IN CALIFORNIA,
OREGON, AND HAWAII, 1969-71.

	Percentage Change, Live Births 1969–70	Percentage Change, Live Births 1970–71
Oregon	+4.8	-6.0
California	+5.5	-6.8
Hawaii	+5.7	-4.2

Source: National Center for Health Statistics, supra note 19.

formed in California was quite high; at the same time, other states were changing their abortion policies, and this may have had some impact on Oregon and California residents.²²

It would be unwise to conclude that Hawaii's thousands of resident abortions had no impact at all on live births. Other states that made elective abortion lawful in 1970 or 1971 experienced a decrease of about 10 percent in live births.²³ It thus seems likely that Hawaii experienced a fairly substantial increase in abortion that is hidden to some degree by a rising birth rate. The question is to what degree. If Hawaii's expected birth rate for the impact year would have been another 9.6 percent higher but for the change in policy—and Table 6 suggests that this is much too high an estimate—then 1,585 more babies should have been born in the 1970–71 impact year than in the 1969–70 period. Since there were actually 290 fewer live births, the difference between actual and predicted births is 1,875, indicating a dark figure for prior abortion of about 1,000.²⁴ Using these data, therefore, the actual dark figure lies between 2,500 and 1,000.

The data in Table 2 and Table 3 on the quality of abortions in Hawaii provide another approach to estimating the degree to which abortion under the new regime represents a reduction in expected

²² See note 3 supra. Two more general problems arise in comparing Hawaiian birth totals to those of other states. First, Hawaii is demographically unique. Second, and even more important since it qualifies any interstate comparisons of births after several states have changed their abortion policies, elective abortion opportunities in one state may reduce the number of births in other states. For example, abortion became elective in New York on July 1, 1970. In 1971 live births in New York were 10.6 percent below their 1970 level, and births in Connecticut, Pennsylvania, and New Jersey declined by 9.9 percent, 6.2 percent, and 5.3 percent, respectively. NATIONAL CENTER FOR HEALTH STATISTICS, supra note 19. It is unclear whether these figures reflect New York abortions, an area-wide decline in conceptions, or both.

²³ In states that adopted elective abortion prior to 1971, live births declined in 1971 by the following percentages: Washington, 11.1; New York, 10.6; Hawaii, 4.2; and Alaska, 3.1. *Id*.

²⁴ A small percentage of pregnancies do not go to term because of spontaneous miscarriage.

live births rather than a continuation of previously uncounted abortions performed on Hawaiian women under the old system. If a particular group of women—single women or Caucasians, for example—is more likely to have abortions under the new system, the birth rate for that group should decline more sharply than the birth rate for less abortion-prone groups in Hawaii's population.

Table 7 shows the rates of illegitimate live births in Hawaii for the first eight months of 1969, for the year prior to the impact of the new law on births, and for the first year after the law should have had an impact.²⁵

TABLE 7
ILLEGITIMATE BIRTHS AS A PERCENTAGE
OF LIVE BIRTHS, HAWAII

First Eight Months, 1969	Sept., 1969-Aug., 1970	Sept., 1970-Aug., 1971
9.8	9.8	8.9

SOURCE: Unpublished data provided by Hawaii Department of Health (copy on file at *The University of Chicago Law Review*).

During the first ten months of the new abortion law, there were about fifteen hundred abortions performed on single women;²⁶ at the same time there were only about 175 fewer illegitimate births than there were during the preimpact period.²⁷ The reciprocal 1,325 abortions cannot, however, be taken as an estimated dark figure since some single women who would have married under the old law may have aborted under the new one.²⁸ But we can assume that the postlaw

²⁵ The one-year impact period was determined to reflect the fact that an abortion occurs before the time that the pregnancy would have resulted in live birth. Since a majority of the first thirty-three abortions performed in three hospitals surveyed involved pregnancies that doctors estimated would have come to full term after September 1, 1970, September was considered the first month during which the new policy could be expected to influence the birth rate. See Unpublished data provided by Roy G. Smith, M.D., Associate Professor of Maternal and Child Health, University of Hawaii (copy on file at The University of Chicago Law Review).

²⁶ This figure is approximately ten-twelfths of 1,865, the number of abortions performed on single women during the first full year under the new law.

²⁷ This is an estimate derived by substracting the actual number of illegitimate births from the number that would have occurred if illegitimate births had continued at the rate of 9.8 percent of legitimate births. See Table 7 supra.

²⁸ It is of some interest, however, that the number of marriages in Hawaii rose in 1970, the first year in which the number of pregnancy-induced marriages should have declined if the change in abortion law resulted in an increased number of abortions on single women. The overall increase in 1970 was 7 percent compared to a 9 percent increase in 1969. Among Japanese women, the group for which the number of abortions on single women is highest in comparison to the number of illegitimate live births, marriages increased by 7 percent in 1970 after remaining level in 1969. Among 15–19-year-olds, on

abortions should have a much more dramatic impact on illegitimate than on legitimate births.²⁹

Analysis of birth and abortion trends by ethnic group provides another indication of the extent to which overall birth figures conceal a number of births prevented under the new law. Table 2 showed that Caucasian and Chinese and Japanese women were more than twice as likely to get abortions as Hawaiian and part-Hawaiian women, with other ethnic groups falling in between. If abortions are having a major impact on the birth rate, the rate of births to members of more abortion-prone groups should be rising by less or dropping by more than the rate of births to members of other groups. The absence of such an effect would suggest that women who are highly abortion-prone after the change in the law were highly abortion-prone before the change. Table 8 compares average monthly births for the periods before and after the impact of the changed law. As Table 8 shows, there is no strong reciprocal relationship between abortion-proneness and birth

TABLE 8

Average Monthly Birth Rates and Abortion/Live
Birth Ratio by Ethnic Group

	Sept., 1969– Aug., 1970	Sept., 1970– Aug., 1971	Percentage Change	Abortions/ Live Births*
Caucasian	488	472	-3.3	1/5
Chinese and Japanese	297	278	-6.4	1/4
Hawaiian and Part-Hawaiian	302	288	-4.6	1/11
Other	288	313	+8.7	1/7
	1,375	1,351	-1.8	

Sources: Report to the Legislature, supra note 5, at 16; Unpublished data provided by Hawaii Department of Health (copy on file at The University of Chicago Law Review) (live births).

whom one abortion is performed for every three marriages, the number of brides increased by 7 percent in 1970, compared to a 21 percent increase in 1969. See 1970 Hawahi Dep't of Health Ann. Rep. 70, table 59; 1969 Hawahi Dep't of Health Ann. Rep. 45, table 45; 1968 Hawahi Dep't of Health Ann. Rep. 45, table 44. Thus, any tendency for the new law to reduce the number of marriages is not apparent in the 1970 data: since the ratio of the number of abortions performed on single women to the number of marriages is 1 to 5, the continued increase in marriages may have occurred despite some reduction in pregnancy-induced marriages. There were 10,599 marriages in Hawahi in 1970. 1970 Hawahi Dep't of Health Ann. Rep. 70, table 59. For the number of abortions performed on single women in 1970, see note 25 supra.

^{*} See Table 2 supra.

²⁹ Table 9, infra, shows the expected relationship but also shows the impact to be modest.

rate trend. Births among the least abortion-prone group (Hawaiian and part-Hawaiian) decreased at about the same rate as births among the two most abortion-prone groups. We do not, of course, know what differences there might have been in the trend absent a change in the law. But the data in Table 8 are consistent with a dark figure of prior abortions on the high end of the 1,000 to 2,500 range mentioned earlier.

There is, however, as Table 9 indicates, some reciprocal relationship between the degree to which an ethnic group's single women are abortion-prone and the ethnic group's illegitimate birth rate trend. The greatest relative decline in the rate of illegitimacy occurred among Causasians and Japanese, the two groups with the highest ratio of abortions on single women to illegitimate live births. This indicates that making abortion elective somewhat increased the frequency of abortion. But the decrease in illegitimate live births is significant only among Caucasian women. Among Japanese women, illegitimacy declined by only 1 percent of live births even though 330 abortions were performed on members of this group. It seems likely, therefore, that the dark fignre of abortions, which was high among single women of all ethnic groups, was highest for Japanese women.

A poll of physicians taken in Hawaii before the change in the law allows a comparison of a few of the characteristics of women who requested legal abortions before the change with the characteristics of women who received abortions after the change. The two groups

TABLE 10

PERCENTAGE DISTRIBUTION OF ABORTION PATIENTS AND WOMEN REQUESTING ABORTIONS BY MARITAL STATUS

	Women Asking for Abortions, 1969	Abortion Patients, 1970–71
Single	60	54
Married	29	36
Separated and Divorced	11	9
	100% (927)	100% (3643)

Sources: Report to the Legislature, supra note 5, at 13-14; Smith, Manner & Goto, supra note 18, at 210.

of women are basically similar, except that the percentage of single and separated women asking for abortions in 1969 is slightly higher. This difference could be a sampling error. But if it is an accurate measure of prechange abortion demand, the movement toward a distribution more like that of mothers in general suggests some expansion in the

TABLE 9
ESTIMATED ABORTIONS ON SINGLE WOMEN AND ILLEGITIMATE LIVE BIRTHS BY ETHNIC GROUP

	(1) Estimated Abortions	(2) Illegitimate		Illegitim per 100 L	Illegitimate Births per 100 Live Births	(6) Percentage	(7)* Deviation in Number of
	on Single Women First Ten Months	Births Impact Year	(3) Ratio (1)/(2)	(4) Jan., 1970– Aug., 1970	(5) Sept., 1970– June, 1971	Change Had Rate Been Constant	Illegitimate Births from Old Rate
Caucasian	835	331	2.5/1	7.3	5.8	-21	85
Japanese	330	92	3.6/1	4.2	3.8	121	1.25
Hawaiian and Part-Hawaiian	145	609	1/4.2	17.2	17.6	+ %	+14
Other	322	410	1/1.3	10.9	9.5	-13	09-

SOURCES: Unpublished data provided by Hawaii Department of Health (copy on file at The University of Chicago Law Review) (births); Unpublished data provided by University of Hawaii research group (copy on file at The University of Chicago Law Review) (abortions). * Change in illegitimate live births per 100 live births ((4,-(5)) times number of live births for impact period. rate of abortions. The modest extent of that movement indicates, however, only a relatively modest expansion in demand.

One other fact about the quality of abortion after the change in the law may bear upon the dark figure of abortion. The new Hawaiian law removed criminal sanctions only for abortions performed before the fetus becomes viable, which occurs sometime after the twenty-second week of pregnancy.³⁰ Table 11 shows the reported number of weeks that women in Hawaii's very first group of abortion cases had been pregnant.

TABLE 11

Percentage Distribution of Physicians' Estimates of Term of Patient's Pregnancy,
Abortions Performed during First Two Weeks and First Year
of Elective Abortions, Hawaii

Estimated Weeks Pregnant	First Two Weeks	First Year	
8 or fewer	27	45	
9–12	42	42	
13–16	12	6	
17 or more	15	7	
Unknown	3		
	100% (33)	100% (3643	

Sources: Report to the Legislature, supra note 5, at 6, Table 3; Unpublished data provided by Roy G. Smith, Associate Professor of Maternal and Child Health, University of Hawaii (copy on file at *The University of Chicago Law Review*).

During the first two weeks of the new law, a larger than usual number of patients had been pregnant for thirteen weeks or more. This may have been because some women sought abortions who would not have done so had the law not been changed, or because some women and doctors postponed, for a very few weeks, what would otherwise have been illegal abortions. The fact that only a small number of patients during the first weeks as a whole were more than sixteen weeks pregnant seems to indicate that most of the abortions in the first group had been postponed, rather than that they were motivated by the change in the law.

There is, unfortunately, no convenient mathematical formula by which to combine all these indicators into a single numerical estimate of the rate of prelaw abortions in Hawaii. What can be said is that the prior rate was probably more than one-half the rate of abortions in the year after the change and that an estimate of two-thirds would not be unreasonable. This would allow for a 1970–71 projected increase of

³⁰ See R. Benson, Handbook of Obstetrics and Gynecology 12 (4th ed. 1971); G. Flanagan, The First Nine Months of Life 77 (1962).

more than 5 percent in the birth rate if the number of abortions had not increased.³¹

An objection may be raised that using birth rates in this way assumes that sexual morality and concern about birth control remained relatively constant after the change in the law. Elective abortion, it may be suggested, would lead to less punctilious birth control and fewer worries about sexual activity, increasing the number of pregnancies and making prior birth experience a poor basis from which to estimate behavior after the law was changed. There is much to be said for studying the impact of abortion laws on attitudes toward sex and birth control, and something to be said for the possibility that change in abortion policy might, in time, have the suggested effects. It seems naive, however, to suggest that profound changes of this kind can take place almost instantaneously. Moreover, the abortion and birth rate pattern during the first three months of the operation of Hawaii's elective abortion law involved pregnancies of women who conceived before the law took effect; and the pattern of abortions and births during this initial period is quite similar to the pattern for the next seven months.32

A dark fignre of abortions equal to 10 to 15 percent of live births thus seems a reasonable estimate of Hawaiian experience just before the change in the law. These fignres may be too low if a large number of unreported and illegal abortions continued after the change in policy; but this possibility seems unlikely. The incentive for a physician to report an abortion and thereby gain complete safety is strong, and, since medical abortion costs average approximately \$350,33 the opportunity for nonmedical abortionists to compete with a private, fairly inexpensive, and safer alternative seems rather limited.

It is difficult to determine how many abortions were performed by Hawaii doctors, or indeed in the state of Hawaii, before the change in the law. Clearly, however, Hawaii physicians were intimately involved in prechange abortion practice at least in a referral capacity. Women

³¹ Only two states recorded a year-to-year increase of more than 5 percent in 1971 and only twelve had increases of more than 1 percent. See NATIONAL CENTER FOR HEALTH STATISTICS, supra note 19.

³² For information on the number of abortions and marital status of patients during this period, see Table 4 supra. Births during the period September-November, 1970, decreased by 0.3 percent compared to the same period the year before. Births during the nine months, December, 1970-August, 1971, when postchange conceptions were aborted, decreased by 2.6 percent. See Unpublished data provided by Hawaii Department of Health (copy on file at The University of Chicago Law Review).

³³ REPORT TO THE LEGISLATURE, supra note 5, at 12.

seek out doctors to determine whether they are pregnant. Even if a woman knows that there is a public policy against abortion, she may ask one or more doctors to arrange an abortion.³⁴ Since a woman was apparently not liable under prior Hawaiian law for soliciting her own abortion,³⁵ there was no harm in asking and, apparently, a good deal of help. The 54 percent of Hawaii physicians who responded to a 1969 survey reported a total of 1,557 abortion requests. Table 12 indicates the distribution of responses to the 985 of these requests about which the doctors were willing to supply information.

TABLE 12 Physicians' Responses to Abortion Requests, Hawaii, 1969

Request Refused	3	1%
Patient Referred	6	9%
to Japan	30%	
to mainland United States	7%	
to other places to Hawaii doctor	4%	
(including respondent) place of referral	12%	
not mentioned	15%	
	100	0%

Source: Smith, Manner & Goto, supra note 18, at 211.

Two qualifications are necessary, however, in order to discuss these data. First, the number of abortion requests should not be confused with the number of pregnant women who made such requests, since one woman might consult a number of doctors before obtaining a satisfactory response.³⁶ Thus, in 69 percent of the cases about which they supplied information, the physicians did something other than refuse the request; but the percentage of women whose requests were referred was probably higher than 69 percent. Second, while there may be reason to trust a doctor's reply concerning whether he referred a patient, there is less reason to believe his statement concerning where he referred her: of all possible referral strategies listed in Table 12, only

³⁴ A group of 111 women in one study made a total of at least 47 abortion requests to physicians. N. Lee, supra note 10, at 68-69.

³⁵ Whether a woman could have been prosecuted for conspiracy or for aiding and abetting a violation of the previous abortion law was never determined, but on occasion "victims" and "necessary parties" to offenses are not liable under those theories. See W. LAFAVE & A. SCOTT, JR., CRIMINAL LAW 521 (1972).

³⁶ See generally N. LEE, supra note 10.

referral outside the state would relieve the doctor of criminal liability. The popularity of this response, therefore, is not unexpected.

What is unexpected is the degree of referral revealed by the responding doctors. Because these physicians played such a key role in prechange abortions, one must generalize only with caution from the Hawaiian experience. Were women and doctors behaving the same way in the rest of the United States in 1969? Are they now? Might not physician referral practice in 1969 reflect an anticipation of imminent change in the law?

There is reason to believe that many pregnant women, who are not prosecuted for such requests, do ask doctors for help in securing abortions. The number of women who want abortions may vary among states as well as among countries, religions, classes, and ethnic groups. But the multiethnic character of the demand for abortion before and after the change in Hawaii's law suggests that a fairly substantial number of women wanting abortions is a fact of modern American life.

The reaction of doctors to abortion requests is probably less of a constant. Physicians in different parts of the country may have different moral attitudes and anxieties about law enforcement. It should be remembered that the information available for Hawaii relates to the period just before a sharp change in legal policy. In addition, while Hawaii is thousands of miles away from Japan, it is culturally linked with that country, and it was possible for many women to fly to Japan for an abortion. This fact may have affected doctors' moral views about abortion and its prohibition.³⁷ A doctor in the habit of discussing a legal alternative with his wealthier patients might find it harder to condemn as immoral the illegal alternative paths to abortion.

In this sense, Hawaii in 1969 may have differed from the mainland, but only in that it was slightly ahead of its time. By mid-1970, non-criminal abortions had become available to residents of all states at prices considerably lower than the round-trip fare from Honolulu to Tokyo. A referral to a state where abortion is legal is not a criminal conspiracy because the act is not criminal where it is to be performed.³⁸ One wonders, therefore, whether physicians in other states can maintain any firm sense that it is ethically acceptable to refer women to

³⁷ It certainly may have influenced the views of their Japanese patients. See Table 9 supra.

³⁸ See Developments in the Law—Criminal Conspiracy, 72 HARV. L. REV. 920, 945 (1959). There is, however, some authority for the proposition that a state can try an offender for acts committed in another state if the location was selected to evade the state's policy. See Commonwealth v. Crass, 180 Ky. 794, 203 S.W. 708 (1918).

doctors in New York, for example, but not to doctors willing to perform abortions in their own state. Thus, the moralizing effect of one state's criminal law on abortion may be neutralized to some extent by the criminal law of sister jurisdictions.

Whether a statute that legalizes only "therapeutic" abortions serves in the same way to neutralize feelings of moral disapprobation about abortions that are not within the statute's terms is a slightly different issue. With a therapeutic statute, the doctor has at least some basis other than geography and wealth for distinguishing among abortion requests. It seems, however, that the line between justifiable and unjustifiable abortions under statutes of this sort is never very firm³⁹ and is usually lacking in moral persuasiveness.⁴⁰ There is, therefore, a real question whether the moral force associated with criminal laws against abortion can survive compromise legislation and geographic diversity. Moral objections to abortion that are not founded upon its criminalization alone may also feel the pressure of social change, but are more likely to survive, since they have roots independent of state policy.

II. DETERRENCE AND ABORTION

Andenaes introduces his discussion of abortion by stating that the setting in Western countries "is characterized by strict laws, weak enforcement and a high rate of criminal abortions," a statement that describes quite accurately the situation in Hawaii before the change in the law. Andenaes then presents the views of some American criminal lawyers that our abortion laws achieve little in the way of general deterrence. Using data from Scandinavia, Japan, and eastern Europe, he disagrees with these estimates; he suggests that "there are probably few areas where so little enforcement has so much effect as in the field of abortion." In arguing that few crimes are theoretically as deterrable as abortion, Andenaes is on firm ground. But the Japanese and eastern European examples seem inapposite: both abortion demand and apparent deterrence were much less in Hawaii before the change in its abortion law.

It is true that the old law deterred a sufficient number of abortions

³⁹ See, e.g., the standard proposed in Model Penal Code § 230.3(2) (Proposed Official Draft 1962): "substantial risk that continuance of pregnancy would gravely impair the physical or mental health of the mother."

⁴⁰ See, e.g., ORE REV. STAT. § 435.415 (1971), providing that fetal life can be terminated if the child would be born with a serious mental or physical defect or if the pregnancy resulted from felonious intercourse. From the standpoint of fetal rights, capital punishment seems a rather severe mechanism for dealing with physical handicap.

⁴¹ Andenaes, supra note 2, at 542.

⁴² Id. at 545.

to have a slight effect on the birth rate. But if the frequency of legal abortion after the law was changed can be used as a measure of the potential demand for abortion while it was still unavailable lawfully, then more than half the potential demand in a state where the operation was illegal appears to have been satisfied.

Even if the estimate of deterrence could be stated more precisely, it would be difficult to come to firm policy conclusions concerning the benefits of the prohibition or to compare the impact of criminal law prohibition in this area with its impact in other areas of behavior. The policy conclusion is difficult to reach because a cost-benefit study of prohibition must factor the number of abortions prevented by the social value of each such prevention. It is difficult to get much agreement on the latter. Comparison with other crimes is difficult because little is known about the potential rates of other types of presently criminal behavior.

How is the criminal law thought to prevent abortion? Where did it go astray in Hawaii? Criminal penalties for abortion may reduce both the demand for and the supply of abortion. By driving abortion practice underground the criminal sanction may also disorganize the market, so that women who want abortions and people willing to perform them cannot find one another.

Making or keeping abortion illegal may reduce the number of women who are willing to ask for an abortion in a number of ways. It can create or reinforce women's moral reservations about abortion. It can make them unwilling to risk the social disapproval they perceive will result if they request an illegal and immoral procedure. And it can make women fearful of public exposure and involvement with law enforcement even if they are not themselves subject to prosecution. Illegality can also have similar effects on others—friends, sex partners, family—who play a significant role in the events leading to an abortion request.

It is difficult to determine, however, the extent to which these obstacles do reduce the number of women who are willing to ask for abortions. A number of observers have concluded that few women fail to overcome them—a conclusion usually based on the observation that women who seek illegal abortions are strongly motivated and thus difficult to deter.⁴³ But this reasoning cannot establish that criminalization of abortion does not have a general deterrent effect. The behavior of women who do seek criminal abortions is an insufficient basis for predicting the behavior of women, perhaps with weaker drives toward

⁴³ See H. PACKER, supra note 2, at 343-44.

abortion, who do not seek the operation when it is unlawful but might do so if the prohibition were removed. Information on abortion experience in jurisdictions where the law undergoes a change is necessary to determine the extent to which prohibiting abortion has a general deterrent effect. The change in the law presents the opportunity to study the number of women who are deterred by the prohibition and whether women who request abortions when the law is changed are similar as a group to those who request abortions when they are illegal.

The Hawaii data suggest that when the criminal penalty is totally removed, the increased number of abortions, in the short term, is relatively modest, and the type of women requesting abortions does not significantly change. It is instructive to try to reconcile these findings with more general statements that have been made about the deterrent impact of law. Some commentators explain that when behavior is strongly motivated, it is difficult to deter, and suggest that women are strongly motivated toward abortion.⁴⁴ If all pregnant women could be divided into two groups, those who very much want to have the baby and those who very much do not want to have the baby, it would be possible to make the strength of woman's drive toward terminating her pregnancy into a complete explanation of the relatively inelastic demand for abortion in Hawaii's first elective year.

Data referred to earlier, however, suggest that many more women seek abortions in other countries than in Hawaii. And it seems rather unrealistic to suppose that all family additions in Hawaii are either very much wanted or very much unwanted. Rather, it may be the case that many pregnancies are greeted with ambivalence and that there are reasons, other than fear of the law, why women in Hawaii may consider abortion unacceptable. These other barriers to abortion, chiefly moral reservations and perceived social stigma, may keep all but the strongly motivated from getting an abortion. And it would not be surprising if the strongly motivated, having already passed the other barriers, are relatively less sensitive to the criminal status of abortion.⁴⁵

These speculations are consistent with finding that one group of more strongly motivated women—those who are single—is much more likely to have abortions, both before and after the advent of elective abortion, than another group—married women, fewer than 10 percent of whom have abortions even after the change in the law.

To say that women who have overcome the moral and social barriers to abortion are relatively less deterrable than persons tempted to en-

⁴⁴ Id. at 344; Andenaes, supra note 40, at 545.

⁴⁵ See F. ZIMRING, PERSPECTIVES ON DETERRENCE 50-51 (1971).

gage in morally neutral behavior, such as illegal parking, does not mean that making abortion criminal will fail to influence the demand for abortion.⁴⁶ The additional barrier imposed by making it criminal to perform abortions might well make some women who would otherwise seek abortion unwilling or afraid to ask for it. And the extent to which the law is enforced can have marginal deterrent impact. But the existence of strong barriers other than those imposed by law suggests that less variation in rate can be expected here than in areas where the only substantial reason why people should refrain from prohibited behavior is the threat of criminal penalties.

So far, moral and social feelings about abortion have been discussed as if they function independently of variations in criminal law. Yet the fact that abortion was criminal may have reinforced moral compunctions about abortion; and removing the legal stigma could undermine the social feelings that are a major influence on demand for abortions in Hawaii. Since it may take a long time to erode moral feelings previously supported by law, the first-year data from Hawaii may not reflect the full potential impact of decriminalization on the demand for abortion. The problem with longer-term comparisons is that other social forces will also be at work, and attributing future movements in abortion rates—for example, a greater proportion of married women receiving abortions—to the 1970 change in the law will become more difficult.

It should also be noted that law is only one source of moral feelings and that many kinds of behavior remain unacceptable to many people when criminal sanctions are removed. For example, Illinois abolished criminal penalties for private homosexual behavior in 1961, but a substantial social stigma seems to remain. There are other kinds of behavior—perhaps marijuana use is one—where the social stigma is more dependent on the criminal law. It is possible, then, but by no means either certain or verifiable, that the long-run effect of making abortion elective will be to increase the demand for abortion significantly.

The effect of abortion laws on the supply of abortions is also uncertain. Deterrence, Andenaes says, "is due primarily not to the effect of criminal law on the motivation of women . . . but rather to the effect on the medical profession." While a variety of persons, medical and nonmedical, might make themselves available as abortionists, the supply of medical abortionists may be particularly important. Medical abortion is safer than nonmedical alternatives and a limited supply of

⁴⁶ Id. at 55-56.

⁴⁷ Andenaes, supra note 2, at 545.

medical abortions might therefore limit the number of women willing to request or able to afford abortion. "[S]ince the medical profession on the whole is quite susceptible to the threat of law and censure of society, the legal prohibition may prevent the mother from obtaining abortion without respect to her own attitude." 48

If doctors are particularly susceptible to the threat of sanctions, it is also true that the threat of sanctions must do a fairly thorough job of keeping doctors from becoming abortionists, because a very small percentage of all doctors could service all abortion demand if some mechanism existed to bring them together with the women who wanted such operations.⁴⁹ Under these circumstances, the financial rewards for abortionists would be staggering. And since new abortion technology includes procedures that nurses and paramedical personnel can perform, the criminal law must keep almost all of a large group law-abiding if it is to restrict seriously the supply of abortions.

In principle, the easiest path to limiting the supply of abortions relates not just to deterring qualified persons willing to perform such operations (although law enforcement would affect this number), but also to reducing the number of doctors and others willing to pass women into the information channels that lead to an abortion. In Hawaii the quite weak threat of prosecution for performing abortions may well have bolstered the willingness of doctors to refer patients to others. The referral process, most effectively centered in the medical profession, ⁵⁰ appears to be a key link in the prospect for deterrence and also one of the missing links in Hawaii.

Part of the explanation for the high rate of referrals by physicians in Hawaii was the availability of foreign abortions, referral to which rendered the physician free of criminal liability. But Table 11 shows a high rate of in-state and unexplained referrals as well as referrals abroad. It seems likely that doctors did not fear criminal liability for referral as much as one might expect, and it may well be that these doctors were correct in thinking that they ran few risks in the referral process, which could have been seen in a different light than actual abortion practice.

As of this writing, out-of-state legal abortion is cheaper and easier for residents of every state in the Union than was noncriminal referral

⁴⁸ Id.

⁴⁹ One abortionist has reported performing up to twelve hundred abortions per year. See Whittemore, The Availability of Nonhospital Abortions, in 1 Abortion in a Changing World 212 (R. Hall ed. 1970).

⁵⁰ All but 9 of one sample of 114 women who had received abortions had first seen a doctor. N. Lee, *supra* note 10, at 46.

in Hawaii in 1969. It would be possible, of course, to make referral to another state for abortion a criminal offense and thus attempt to disrupt the link between abortion supply and abortion demand. It is also probable that vigorous enforcement of such a law could have effect in other states and could have reduced Hawaiian abortion in the period before the change in the law.

Conclusion

It appears that Hawaii's experience before the change in the law stands not so much for the proposition that abortion is undeterrable as that it was undeterred. At the same time, the availability of abortions in other states and increasing demand that abortions be made lawful in the rest make substantial deterrence a difficult task for any jurisdiction in the 1970s. This finding could be considered an argument either for stricter controls or for no controls, depending on one's regard for the value of fetal existence.

The first year of one state's experience with elective abortion is in no sense conclusive. More studies of Hawaii are expected to follow, and other states with studiable changes in policy should be watched. Efforts should be made, in particular, to determine whether several years of experience with elective abortion undermines feelings of guilt—guilt that stems in part from a history of criminalization. If so, change in the law will be important not so much for single women, who are already more likely to have an abortion than an illegitimate child, but for married women, who are presently less motivated to abortion and who account for the great majority of live births.

Should this lessening of the moral impact of law occur, students of deterrence will take note. For the major impact of elective abortion will have been not so much on supply as on demand, not so much on doctors as on women, and not so much a matter of removing penalties as of removing the stigma associated with abortion.