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(by David Lester, et al.)

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THE LAST WEEK OF THE LIFE OF ARTHUR INMAN; A STUDY OF HIS DIARY

David Lester & Heather Swenson-Brilla

Abstract: The last week of the diary of Arthur Inman, who died by suicide, showed a withdrawal from thoughts of others, an increase in negative emotions, a decrease in positive feelings and, surprisingly, a decrease in words concerned with dearth.

Arthur Inman was born on May 11th, 1895, in Atlanta, Georgia, the only child of rich and prominent residents. He died by shooting himself on December 5th, 1963, in his home in Boston. He left a diary of approximately 17 million words, some of which has been typed and microfilmed. An abbreviated version of the diary was edited by Daniel Aaron and published (Aaron, 1985), amounting to 1599 printed pages in two volumes. Aaron accomplished an incredibly difficult task and is to be commended for his effort.

Unfortunately from the point of view of a suicidologist, Aaron was a Professor of English and American Literature and Language, and he chose what to include in the published volumes on the basis of throwing light on the social and political events of the time, albeit from one person's perspective. In particular, the edited extracts end in 1951 on page 1526, and the last 12 years of the diary are omitted except for very brief extracts of no more than a few pages. The missing years are probably of little interest to a social historian, but crucial to a psychologist trying to understand the reasons for Inman's suicide.

Inman was chronically suicidal all of his life, with 50 or so entries on death and suicide from 1912 to his suicide in 1963. Inman was in great psychological pain throughout his life. Inman wrote about hating life in 1925 and wondered why he did not kill himself in 1927. He thought seriously about shooting himself in 1929 (his wife had hidden his gun) and acquired chloroform and wrote suicide notes in 1934 (but decided not to kill himself). His depression was constant, and he often wrote that his life had been a failure (e.g., p. 941) and that he was a "nobody" (e.g., p. 914). In writing about his suicidal desires, he sometimes mentioned his aversion to noise in these early years and the pain from his medical problems. He wrote that, if his doctor (Dr. Pike) was no longer available, he would kill himself.

Inman's first suicide attempt was in 1941. Nothing much had changed in his life at that point except that the traffic patterns had changed on Huntington Avenue outside the apartment building in which he lived.[1] The noise and the traffic lights upset him and disturbed his sleep. On November 19th, he had his chief aide nail rugs over the windows, and he began to write of killing himself. (Remember that he lived most of the time in his

[1] There was some ongoing stress in his marriage, but this was present throughout their marriage.

darkened apartment, listening to books for the blind or having books read to him. His life was similar in some ways to living in a small dungeon.) On November 27th, he took an overdose of sleeping pills (nembutol and Veronal), and his aide found him at 7.30 am the next day. Inman wrote on December 3rd, "I wish the doctors had let me die" (p. 1047). He did not attempt suicide again until 1963. He was pleased that he had the courage to attempt suicide, but he wished that the doctors had let him die.

In 1963, Inman's life continued in pretty much the same style, except that he was getting older and there was a major change in his living conditions. The apartment building in which he lived was very close to what became the Prudential Center. Buildings all around his apartment were torn down, and construction commenced on the 52-story building. The other change was that Inman's wife was drinking more heavily (she eventually joined AA), and Inman's consumption of alcohol also increased.

He took an overdose of sleeping pills in March 1963, was found by his housekeeper and ended up in Massachusetts General Hospital. Rather than move back to his apartment, he moved to an apartment hotel in Brookline. He could not adjust to the change, especially the new noises. Aaron described him as

> bored, irritable, nothing could distract him for long: not sex or reading or cuddling little girls. "I feel a harried ninety years old," he wrote, "with gathering pressures closing in about. I have lived too long. I have written too much."…..He confessed himself a failure and doubted that his work would survive – it would have been better for himself and everyone connected with him if he had died in 1941." (p. 1598)

Inman knew that overdoses would not bring certain death, and so he shot himself on December 6th, 1963.

Lester (2014) reviewed articles written about Inman by others and presented a qualitative analysis of the diary to throw some light on Inman's life and the reasons he chose to die by suicide. Later, Lester went to the library at Harvard University and photo-copied the last month of Inman's diary. The present article subjected the last week of the diary to a quantitative analysis using Pennebaker's LIWC program (Pennebaker, et al., 2001).

The LIWC has 72 categories, and the program calculates the percentage of words of each category in the text (with the exception of word count). For correlations over the last 7 days (and entries in the diary) of Inman's life, 16 correlations were statistically significant (two-tailed $p < .05$) and 10 were marginally significant ($p < .10$).

The seven noted grew shorter over the week ($r=-0.91$). There were fewer references to himself ($r=-0.73$) and to others ($r=-0.90$), including family members($r=-0.89$) and friends ($r=-0.76$). There was an increase in negative emotions ($r=+0.70$) and a decrease in positive feelings ($r=-0.90$). Inman grew less interested in work and money ($r=-0.84$ and -0.86, respectively), but he also made fewer mentions of death as the days passed ($r=-0.87$).

The last entry in his diary on the day before his suicide was:

> December 5 - This is being horrible beyond the credible. Twelve divisions of migraines, Eidetic imagery until I am harried and frightened into desperation. Can't see more than is adequate to get around. Everything overgrown with # and the imaginary elements of substance #.[2]

Discussion

Arthur Inman lived 68 years. For all of his adult life, he was in chronic intense physical pain, and he lived a severely restricted life – staying in his darkened apartment almost all of the time. He had an unsatisfactory marriage, and those he paid to attend to him, and to whom he grew close, left him after a few years of service. He aspired to be a successful poet, but failed. He hoped that his diary would bring him fame after his death, but he often doubted that it would. The only pleasures in his life seemed to come from the books that were read to him[3] and political news, and from his interactions, social and sexual, with others. He experienced several stressors (parental deaths, marital rifts, and the loss of close friends), but he weathered these well.

What precipitated his suicide attempt in 1941 and his death in 1963 was the disruption to his life caused by the noise and chaos near his apartment. The tremendous change brought about by the construction of the Prudential Center was the stressor that he could not survive. He could not face leaving his "cocoon" in order to live elsewhere. One wonders whether, had the Prudential Center not been built, how long he would have lived.[4]

References

Aaron, D. (1985). *The Inman diary: A public and private confession*. Cambridge, MA: Harvard University Press.

Lester, D. (2014). *The "I" of the storm*. Berlin, Germany: De Gruyter.

Pennebaker, J. W., Francis, M. E., & Booth, R. J. (2001) *Linguistic inquiry and word count*. Mahwah, NJ: Erlbaum.

[2] # indicates an unreadable word from his handwriting. He had almost all of his diary typed, and so he was able to correct the typing. The last few months of Inman's diary were not typed and remain only in his handwriting.

[3] He also listened to recorded books.

[4] For a fuller discussion of Inman's life and death, see Lester (2014).

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WHAT IF MY LOVED ONE DID NOT LEAVE A SUICIDE NOTE?

DAVID LESTER

First, you must remember that we researchers deal with groups of people. We compare one group with another group and see if there are differences. In contrast, a particular individual may not fit conveniently into any "group" and so may differ from the average or from the norm.

There has been some research comparing those who die by suicide who leave notes and those who do not. Most of the studies compare the two groups on simple demographic factors. In 1960, a team in Philadelphia found that note writers and non-writers were similar in age, sex, race, marital status, employment, and suicidal history, but differed in the method used. A team in Los Angeles found no differences in these kinds of factors.

There have two recent studies with large samples. In Ohio, Callanan and David studied 621 suicides for 40 variables and found two differences – note writers more often lived alone and more often had made previous suicide threats. So the two groups were pretty much the same.

However, in Tasmania, Janet Haines, Christopher Williams and I studied 1051 suicides and found many more differences. Those who wrote a note were more often divorced, more often lived alone, were less likely to be under medical supervision or to have seen a doctor recently, and less often under psychiatric care. Note writers more often were in psychological distress (but not more often angry, sad, or withdrawn), less often confused or psychotic and more often hypochondriacs. The note writers killed themselves more often when in interpersonal conflict with others. They also used gas, firearms and poisons more as a method for suicide. Only 33% of the sample left a suicide note.

Based on the Tasmanian study, therefore, it seems that note writers are more often in the midst of interpersonal conflicts and, therefore, have more need to communicate to others.

In contrast, those who do not leave a suicide note tend more often to be medically ill and under psychiatric care. Perhaps they assume that the reasons for their decision would be obvious to their significant others.

But these are simply the general differences. For example, although 37% of those who were *not* psychiatrically disturbed left a note, so did 26% of those who were psychiatrically disturbed. A difference, clearly, but not 100% versus 0%

But let us leave “research” aside, and think about this question clinically. There are several ways that the person dying by suicide can express anger toward significant others – such as directly in the suicide note or by the circumstances of the act (which often traumatizes the survivors). So not writing a note is *not* a hostile act.

It may be that the individual is turned inward and concerned with himself or herself. Consideration for others is less relevant to them because they are so preoccupied with their own mental state and the decision that they are making. Perhaps in their anguish, they are unable to be considerate to others who might find a suicide note that explained the act comforting in some way – emotionally or intellectually. Pain, physical and mental, makes many of us focus inwardly and withdraw from others.

On the other hand, the content of a suicide note may be distressing to survivors. It may express anger and blame toward survivors. It may make survivors feel guilty for not responding better to the deceased. Many suicide notes do express love for the survivors and explain in reasonable way why they are making the decision, and these notes can be a comfort to the survivors. But such comfort cannot be guaranteed.

Some of you may know of *Katie’s Diary*, a book I edited with contributions from colleagues, analyzing the diary of a young woman who took her own life. My colleagues read Katie’s diary which extended over the last year of her life. You would think that they would be able to “understand” why Katie made that decision. But if you read the moving chapter by Silvia Canetto, a letter to Katie, you will see that even this diary of several hundred pages still left Silvia asking the question “Why?” A brief suicide note may, therefore, provide even less understanding.

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THE EFFECTIVENESS OF SUICIDE PREVENTION CENTERS: AN UPDATED META-ANALYSIS[5]

DAVID LESTER

Abstract: An updated meta-analysis of the impact of suicide prevention centres on the suicide rate found a small but statistically significant preventive impact.

It is important to examine the evidence of whether suicide prevention centers do prevent suicide. Dew, et al. (1987) examined five studies on this issue and concluded that there was no overall combined evidence for a preventive impact. However, Dew, et al. did not review all of the studies available at that time on this issue. Lester (1997a) provided a complete review of all of the impact studies and combined the results in a meta-analysis. Lester identified 21 published studies on whether suicide prevention centers prevent suicide, but several of these 21 papers were further analyses or reports of the same data sets. There remained only 14 independent studies. Since then three further papers have appeared, and the present paper includes the results of these studies in the meta-analysis.

The meta-analysis was guided by Rosenthal (1984) who provides formulae for transforming any statistic to a Pearson correlation. Averaging of correlation coefficients, both within studies and between studies, was done using Fisher's z method (Ferguson, 1976). In some cases, the data from the study were re-analyzed for the present meta-analysis. The studies are of two major types: (1) ecological in which the suicide rates of regions with different numbers of suicide prevention centers are compared, and (2) time-series in which the association of the number of centers in one region with the suicide rate is studied over time.

The original studies and the results are shown in Table 1. The overall Pearson correlation was -0.16 with 2,549 degrees of freedom, indicating a small, but highly significant, preventive effect from suicide prevention centers on the suicide rate.

Three new studies have appeared since Lester's (1997a) meta-analysis: Leenaars and Lester (2004) reported a follow-up study on Canada, Lester (1997b) reported a study on the five major regions of Great Britain and Ireland, and Lester (2004) reported a time-series study of Scotland.

The data from these three studies have been added to Table 1, and the overall average effect recalculated (see Table 1). The resulting average correlation coefficient was -0.09 with 3068 degrees of freedom, still a small statistically significant preventive effect from suicide prevention centers on the suicide rate.

[5] Address enquiries to David Lester (lesterd@stockton.edu). Written in 2004

All of these studies were, of course, correlational, and do not show cause-and-effect relationships. However, the preventive effect of suicide prevention centres on the suicide rate, though small, is encouraging.

References

Bagley, C. (1968). The evaluation of a suicide prevention scheme by an ecological method. Social Science & Medicine, 2, 1-4.

Bridge, T., Potkin, S., Zung, W., & Soldo, B. (1977). Suicide prevention centers. Journal of Nervous & Mental Disease, 164, 18-24.

Dew, M. A., Bromet, E. J., Brent, D., & Greenhous, J. B. (1987). A quantitative literature review of the effectiveness of suicide prevention centers. Journal of Consulting & Clinical Psychology, 55, 239-244.

Ferguson, G. A. (1976). Statistical analysis in psychology and education. New York: McGraw-Hill.

Huang, W. C., & Lester, D. (1995). Have suicide prevention centers prevented suicide in Taiwan? Chinese Journal of Mental Health, 8(3), 27-29.

Jennings, C., Barraclough, B. M., & Moss, J. R. (1978). Have the Samaritans lowered the suicide rate? Psychological Medicine, 8, 413-422.

Leenaars, A. A., & Lester, D. (1995). Impact of suicide prevention centers on suicide in Canada. Crisis, 16, 39.

Lester, D. (1974). Effect of suicide prevention centers on suicide rates in the United States. Health Services Reports, 89, 37-39.

Lester, D. (1980). Suicide prevention by the Samaritans. Social Science & Medicine, 14A, 85.

Lester, D. (1990). Was gas detoxification or establishment of suicide prevention centers responsible for the decline in the British suicide rate? Psychological Reports, 66, 286.

Lester, D. (1993). The effectiveness of suicide prevention centers. Suicide & Life-Threatening Behavior, 23, 263-267..

Lester, D. (1994). Evaluating the effectiveness of the Samaritans in England and Wales. International Journal of Health Sciences, 5, 73-74.

Lester, D. (1997a). The effectiveness of suicide prevention centers. Suicide & Life-Threatening Behavior, 27, 304-310.

Lester, D. (1977b). Effect of suicide prevention centers in Ireland and Great Britain. Psychological Reports, 81, 1186.

Lester, D. (2004). The impact of the Samaritan centres on suicide in Scotland. Pomona, NJ: The Richard Stockton College of New Jersey.

Lester, D., Saito, Y., & Abe, K. (1996). Have suicide prevention centers prevented suicide in Japan? Archives of Suicide Research, 2, 125-128.

Medoff, M. H. (1984). An evaluation of the effectiveness of suicide prevention centers. Journal of Behavioral Economics, 15(Fall), 43-55.

Miller, H. L., Coombs, D. W., Leeper, J. D., & Barton, S. N. (1984). An analysis of the effects of suicide prevention facilities in the United States. American Journal of Public Health, 74, 340-343.

Riehl, T., Marchner, E., & Moller, H. J. (1988). Influence of crisis intervention telephone services ("crisis hotlines") on the suicide rate in 25 German cities. In H. J. Moller, A. Schmidtke & R. Welz (Eds.) Current issues of suicidology, pp. 431-436. New York: Springer-Verlag.

Rosenthal, R. (1984). Meta-analytic procedures for social research. Beverly Hills, CA: Sage.

Weiner, I. W. (1969). The effectiveness of a suicide prevention program. Mental Hygiene, 53, 357-363.

Table 1

	Pearson r	df	Method	Nation	Time period
Original Meta-Analysis					
Bridge et al. (1977)	-0.05	194	B	USA counties	1970-1971
Huang & Lester (1995)	-0.35	15	D	Taiwan	1965-1985
Jennings et al. (1978)	+0.08	97	A	English boroughs	1957-1973
Leenaars & Lester (1995)	-0.22	96	C	Canadian provinces	1985-1991
Lester (1974)	-0.11	22	A	USA cities	1960-1969
Lester (1980)/Bagley (1968)	-0.35	54	A	English towns	1957-1964
Lester (1990)	-0.18	18	A	English towns	1958-1967
Lester (1993)	-0.10	405	C	USA states	1970-1980
Lester (1994)	-0.13	90	D	England	1960-1975
Lester, et al. (1996)	-0.22	183	D	Japan	1970-1989
Medoff (1984)	-0.11	462	B	USA states	1979
Miller et al. (1984)	-0.05	924	A	USA counties	1968-1972
Riehl et al. (1988)	no data		D	German cities	1945+
Weiner (1969)	-0.31	2	D	USA cities	1955-1967
AVERAGE	-0.16	2549			
New Studies					
Leenaars & Lester (2004)	-0.22	216	A	Canada provinces	1985-1989 1994-1998
Lester (1997b)	-0.13	101	D	UK & Ireland	1952-1985
Lester (2004)	+0.20	189	D	Scotland	1958-1981
NEW AVERAGE	-0.09	3068			

A: ecological study of changes over time in the regions
B: single year ecological studies
C: ecological studies with correlations over regions

D: time-series studies on a single region

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HAPPINESS AND SUICIDE IN EUROPEAN NATIONS[6]

DAVID LESTER

Abstract: For 16 European nations, a measure of happiness from a social survey was not associated with either national male or female suicide rates.

Although Lester (1989) found the suicide rates of nations were positively associated with a measure of the quality of life, Lester (2002) found that the suicide rates of 15 industrialized nation were not associated with a measure of happiness from the World Values Survey. The present study explored whether a measure of happiness, as measured by a survey of residents of European nations, was associated with national suicide rates.

Ratings were obtained from the European Social Survey, reported by Doherty and Kelly (2010) for 17 European nations, for happiness, enjoyable family relationships, satisfaction with income, health and democracy, community trust and religious belief. The mean age, percentage female and percent employed were also registered for the sample from each nation. Male and female suicide rates for 16 of the nations were available for the year 2000 from the World Health Organization.[7]

Using Pearson correlation coefficients, none of the variables were associated with the male or female suicide rates (range -0.34 to .18, median 0.02). In particular, happiness scores were not associated with male or female suicide rates (r = -0.01 and 0.11, respectively). Thus, a measure of happiness in these European nations was not associated with their suicide rates.

References

Doherty, A. M., & Kelly, B. D. (2010). Social and psychological correlates of happiness in 17 European countries. *Irish Journal of Psychological Medicine, 27*, 130-134.

Lester, D. (1989). *Suicide from a sociological perspective*. Springfield, IL: Charles Thomas.

Lester, D. (2002). National ratings of happiness, suicide, and homicide. *Psychological Reports, 91*, 758.

[6] Address correspondence to David Lester: e-mail (lesterd@stockton.edu).

[7] www.who.int. The nations in the sample were Belgium, Bulgaria, Denmark, Estonia, Finland, France, Germany, Great Britain, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, and Switzerland. Suicide rates were not available for Cyprus.

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DEPRESSION AND SUICIDAL IDEATION IN COLLEGE STUDENTS AS A FUNCTION OF COLLEGE-RELATED VARIABLES[8]

DAVID LESTER

Abstract: A study of college students found that variables associated with their college experience and personal characteristics impacted their scores on measure of depression and suicidality, including year, GPA, religiosity, relationship status, and experiences of racism and sexism

Although college students are often the subjects for research into theories of depression and suicidal behavior, they are less often studied to identify features and experiences of college life that may play a role in their experience of depression and suicidal ideation. For example, Lamis and Jahn (2013) found that self-reports of parent-child conflict, along with depressive symptoms and anxiety sensitivity, predicted suicidal rumination in college students, while Goldstein and Willner (2002) tested the defeat-entrapment theory of depression (Gilbert & Allan, 1998) by inducing depression or elation in college students by means of a music mood-induction procedure, and found that scores on measures of defeat and entrapment were increased after hearing depressing music and decreased after hearing happy music. These types of studies are rarely concerned with variables such as the GPA of the students, their living arrangements (in a dormitory versus at home), membership in fraternities and sororities, and other college life variables

Most of the research on the role of campus life in depression and suicidal ideation has focused on general measures of stressors and acculturation in minority students. For example, in a study of Chinese American students at an American university, Ying, Lee and Tsai (2004) found positive associations between stress from racism, financial worries, academic demands and housing and measures of depression and self-esteem. Lester (2014) found a general measure of campus-related stress was associated with measures of depression but not suicidal ideation. Walker, Wingate, Obasi and Joiner (2008) found that acculturative stress was associated with depression and suicidal ideation in African American college students.

Occasionally, studies on specific campus variables are conducted. For example, Ridgway, Tang and Lester (2014) found that membership in non-residential fraternities and sororities was *not* associated with depression and suicidal ideation, while Lester (2013) found that students living with their parents were less depressed and reported more lifetime suicidal ideation than those living in dormitories. The present study was designed to explore the association of campus and college-life variables with depression and suicidal ideation using a large (greater than 1,000) sample.

Methods

Participants

[8] I should like to thank Dorian Lamis for providing these data.

The participants were 1,200 undergraduate students; 928 females and 272 males, with a mean age of 19.99 (SD = 1.65). There 392 freshman, 272 sophomores, 264 juniors and 272 seniors; 913 were European Americans, 144 African Americans and 143 of other ethnicities.

Procedure

Data collection was conducted through an online survey over the course of three semesters, with approximately equal numbers of participants completing the study during each of the semesters. The students' scores on the variables of interest did not significantly differ by semester of data collection. College students voluntarily completed the survey outside of class time in return for extra credit in their psychology course. Participants were informed of the study in regularly scheduled classes and through a posting on the online participant pool site. Participants completed a demographic survey and the study measures, which were presented in a randomized order. Prior to data collection, the university's Institutional Review Board approved the study and electronic informed consent was obtained from all participants.

Inventories

Participants completed a demographic questionnaire with questions on age, sex, relationship status, year in school, class standing, highest SAT score before entering college, current GPA, transfer student, member of a sorority/fraternity, residence, roommate, ethnicity, current religious involvement (highly religious, somewhat religious and not at all religious), and experience with racism and sexism while in college (rated on a scale of 1 to 5). Participants were administered the Beck Depression Inventory and the Beck Scale for Suicidal Ideation.

Beck Depression Inventory: The Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) has 21 items covering symptoms of depression such as guilt, changes in eating and sleeping patterns, and hopelessness, answered with 4 levels of intensity scored 0-3. Total scores can range from 0 to 63. It has been used in hundreds of studies with well-established reliability and validity (Reinecke & Franklin-Scott, 2005).

Beck Scale for Suicidal Ideation: The Beck Scale for Suicidal Ideation (Beck, Steer & Ranieri, 1988) has 21 items dealing with suicidal ideation and behavior scored from 0 to 2. Total scores range from 0 to 42. A typical item is: I have no wish to die; I have a weak wish to die; I have a moderate wish to die. It has well-established reliability and validity (Reinecke & Franklin-Scott, 2005).

Results

Looking at the simple associations between campus/college variables and BDI and BSSI scores (see Table 1), BDI scores were significantly associated with roommate status, experience of racism and religiosity. BSSI scores were significantly associated with sex, relationship status, roommate status, experience of racism and of sexism, and membership in a sorority/fraternity.

These variables were then entered into multiple regressions to predict BDI scores and BSSI scores (see Table 2). BDI scores were predicted by year, GPA, religiosity and racism. BSSI scores were predicted by relationship status, religiosity and sexism. The amount of variance in the scores accounted for were, as expected, small.

Discussion

The present study sought to identify variables associated with being a college student that might impinge upon their scores on psychological inventories. The present study identified year (freshman, sophomore, junior and senior), GPA, religiosity, relationship status, and experiences of racism and sexism as impacting on measures of suicidality and depression. Research on theories of suicide and depression should, therefore, control for these variables.

References

Beck, A. T., Steer, R. A., & Ranieri, W. F. (1988). Scale for Suicide Ideation; psychometric properties of a self-report version. *Journal of Clinical Psychology, 44,* 499-505.

Beck, A. T., Ward C., Mendelson, M., Mock, J., & Erbaugh, J. (1961) An inventory for measuring depression. *Archives of General Psychiatry, 4,* 561-571.

Gilbert, P., & Allan, S. (1998). The role of defeat and entrapment (arrested flight) in depression. *Psychological Medicine, 28,* 585-598.

Goldstein, R. C., & Willner, P. (2002). Self-report measures of defeat and entrapment during a brief depressive mood induction. *Cognition & Emotion, 16,* 629-642.

Lamis, D. a., & Jahn, D. R. (2013. Parent-child conflict and suicide rumination in college students. *Journal of American College Health, 61,* 106-113.

Lester, D. (2013). Depression and suicidal ideation in college students. *Psychological Reports, 112,* 106-108.

Lester, D. (2014). College student stressors, depression and suicidal ideation. *Psychological Reports, 114,* 293-296.

Reineck, M. A., & Franklin-Scott, R. L. (2005). Assessment of suicide: Beck's scales for assessing mood and suicidality. In R. I. Yufit & D. Lester (Eds.), Assessment, treatment, and prevention of suicidal behavior, pp. 29-61. Hoboken, NJ: Wiley.

Ridgway, R., Tang, C., & Lester, D. (2014). Membership in fraternities and sororities, depression, and suicidal ideation. *Psychological Reports, 114,* 966-970.

Walker, R. L., Wingate, L. R., Obasi, E. M., & Joiner, T. E. (2008). An empirical investigation of acculturative stress and ethnic identity as moderators for depression and suicidal ideation in college students. *Cultural Diversity & Ethnic Minority Identity, 14,* 75-82.

Ying, Y. W., Lee, P. A., & Tsai, J. L. (2004). Inventory of college challenges for ethnic minority students. *Cultural Diversity & Ethnic Minority Identity, 10,* 351-364.

Table 1: Mean Depression and Suicidal Ideation Scores: means (standard deviations)

	n	BDI	BSSI
females 0	928	9.1 (9.3)	2.0 (3.1)
males 1	272	8.0 (8.8)	2.7 (4.4)
t		1.79	3.06**
single 0	664	9.2 (9.6)	2.4 (3.8)
in relationship 1	536	8.4 (8.7)	1.9 (3.1)
t		1.41	2.32*
transfer 0	903	8.9 (9.2)	2.2 (3.4)
no 1	297	8.8 (9.3)	2.2 (3.7)
t		0.18	0.28
frat/sor 0	903	9.1 (9.3)	2.4 (3.7)
no 1	297	8.0 (8.8)	1.6 (2.7)
t		1.91	3.46***
residence			
0 Residence hall	414	8.8 (9.0)	2.3 (2.6)
1 Greek housing	29	9.0 (9.6)	1.0 (1.2)
2 Campus apartment	86	10.1 (9.9)	2.5 (4.5)
3 Off campus	560	8.5 (9.2)	2.1 (3.3)
4 With parents	108	9.9 (9.0)	2.2 (3.4)
5 other	3	13.0 (18.4)	5.0 (6.2)
F		0.90	1.29
roommate			
yes/choice 0	743	8.4 (9.0)	1.9 (3.1)
yes/no choice 1	244	9.1 (8.9)	2.4 (3.6)
no 2	213	10.2 (10.0)	2.9 (4.4)
F		3.52*	7.22***
ethnicity			
black 0	144	9.7 (9.6)	2.0 (3.2)
native 1	8	20.8 (14.4)	6.2 (11.0)
Asian 2	34	11.0 (12.3)	3.2 (5.1)
White 3	913	8.3 (8.7)	2.1 (3.3)
Hispanic 4	41	12.4 (11.1)	2.6 (4.0)
Other 5	62	10.1 (9.8)	2.7 (4.1)
F		4.86***	2.75*

Table 1: continued

	n	BDI	BSSI
sexual orientation			
heterosexual 0	1143	8.7 (9.1)	2.0 (3.2)
gay/lesbian1	16	6.6 (6.7)	5.3 (7.8)
bisexual 2	32	12.5 (9.0)	4.6 (5.5)
unsure 3	5	11.4 (13.2)	6.6 (5.3)
other 4	4	22.0 (14.9)	7.8 (8.4)
F		3.76**	3.76**
Correlations		**BDI**	**BSSI**
Pearsons			
Age		-0.02	0.02
GPA		-0.06	0.02
SAT		0.01	0.06
Year in school		-0.05	-0.02
Class standing		-0.05	-0.02
Sexism		0.05	0.08**
Racism		0.10***	0.07*
Religious involvement		-0.12***	-0.09**
Point biserial			
Sex		-0.05	0.09**
Relationship status		-0.04	-0.07*
Transfer		-0.01	0.01
Frat/sor		-0.06	-0.10***

Table 2: Linear regressions (betas shown)

	BDI	BSSI
Age	0.102	0.018
Sex	-0.073	0.013
Relationship	-0.053	**-0.088***
Year	**-0.174***	-0.031
SAT	0.011	0.052
GPA	**-0.105***	0.002
Transfer	-0.037	0.050
Religiosity	**0.090***	**0.081***
Sexism	0.048	**0.126***
Racism	**0.115***	0.018
R^2	0.049	0.036

* two tailed < .05 or better

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ECONOMIC MODELS OF SUICIDE

Bijou Yang

Suicide ranked as the eleventh leading cause of death in the United States in 2001. There were 30,622 suicides as compared to 20,308 murder victims. The suicide rate of 10.8 per 100,000 people per year was higher than the homicide rate of 7.1, and so people were 50 percent more likely to commit suicide than to be murdered. On the average, one person committed suicide in this country every 17.2 minutes (McIntosh 2003). However, compared to other countries, suicide mortality in the United States is not as dire as it may seem. According to the World Health Organization's World Health Statistical Annual (now online at www.who.int), in 2000 Lithuania, Belarus, and Russia had the highest suicide rates, almost four times that of the United States.[9]

If we use the years of life lost under the age of sixty-five to measure the significance of mortality, then suicide is ranked as the third most important contributor after heart disease and cancer (Congdon 1996). Thus suicide (and, we might add, nonfatal suicide attempts) is one of the major issues facing health and social service providers, especially given the recent trend of rapidly rising suicide rates among youths in many nations (Mathur and Freeman 2002; Freeman 1998; Willis et al. 2002; Middleton et al. 2003; Eckersley and Dear 2002; Micklewright and Stewart 1999; Birckmayer and Hemenway 2001; Al-Ansari et al. 2001; Christoffersen, Paulsen, and Nielsen 2003).

Unfortunately, scholars admit that suicide is still poorly understood despite numerous publications addressing the incidence and causes of suicide (Ruzicka 1995). This may be because suicide is a result of a "multidimensional malaise in a needful individual" (Shneidman 1985, 203), making the causes of suicide "complex and multifactorial" (Gunnell et al. 2003). While psychologists and psychiatrists try to understand suicide in individuals from a psychiatric or mental illness perspective (Lester 1988, 1991; Maris, Berman, and Silverman 2000), sociologists approach suicide from a societal perspective (Lester 1989), and epidemiologists focus on how different segments of the population are affected by suicide (Maris, Berman, and Silverman 2000).[10] Each of these approaches catches only one facet of the phenomenon, rather than the whole.[11]

Without a unified theory of suicide that deals with behavior at the individual level and social influences at the macroecological level, we cannot trace the mechanism of how individuals become suicidal at each stage of life. It is not surprising, therefore, that there are conflicting and inconsistent findings with respect to how socioeconomic factors impact on suicide. For example, according to Gunnell and colleagues (2003), higher unemployment and divorce rates are generally associated with higher suicide rates, but the evidence from time-series data is

[9] The suicides rates were 44.1 per 100,000 per year in Lithuania in 2000, 39.4 in Russia, and 34.9 in Belarus.
[10] The discussion of epidemiological issues on suicides can be found in Maris, Berman, and Silverman 2000.
[11] It should be noted that only three primary disciplines are referred to here in the study of suicide. Other disciplines, such as physiology, ethics, philosophy, and law, are important and are discussed in Maris, Berman, and Silverman 2000.

inconsistent (Platt 1984, 1986; Platt, Miccolo and Tansella 1992; Pritchard 1988; Lester and Yang 1991a; Crawford and Prince 1999; Lester, Curran, and Yang 1991; Stack 1990).

Economics may provide a plausible avenue for the pursuit of a unified theory of suicide. Rational choice theory has attracted a group of followers in sociology (e.g., Coleman 1990; Coleman and Fararo 1991; Bourdieu and Coleman 1991), partly due to Becker's pioneering application of the rational choice model to fertility, marriage, crime, and even addiction (Becker 1960, 1968, 1976; Becker and Murphy 1988). In fact, the same framework was applied to suicide in the 1970s (Hamermesh and Soss 1974), and subsequent research using this approach will be discussed in detail in the next section.

An economic approach can be useful in analyzing suicidal behavior for several reasons. First, suicide involves decision making. Second, economic factors are often found to be associated with suicide at the individual level and at the societal level. Third, suicides entail economic costs to the society. Lastly, economic policies can have both intended and unintended impacts on suicide rates, beneficial or detrimental.

Economics is the study of resource allocation. The amount of the resource of concern tends to be limited, and in order to achieve optimal allocation, certain choices have to be made. Thus, economics is about decision making and its consequences (Hicks 1979, 5). Suicidal behavior is a choice that can lead to death. During the process, besides deciding to end one's life, the individual has to choose a method, whether to write a suicide note, a location for the act, and so on. The process involves making decisions, a process that lies at the core of economic analysis.

It is well documented that economic factors can trigger the suicidal act and are correlated with suicide rates. At the individual level, poverty, business difficulties, or problems related to work are found in suicide notes (Lester et al. 2004; Volkonen and Martelin 1988; Shneidman and Farberow 1957; Fedden 1938).[12] At the macroecological level, income, GDP per capita, unemployment, economic growth, labor force participation, and income distribution/inequality have been found to correlate with the suicide rate (Neumayer 2003; Jungeilges and Kirchgassner 2002; Lester and Yang 1997. Lester 2001; Leenaars, Yang, and Lester 1993; Brainerd 2001; Platt et al. 1992; Gunnell et al. 2003; Gerdthain and Johannesson 2003).

In addition, suicide entails an economic cost to the society and so raises public health and other public policy issues. First, the economic cost of suicide entails both direct and indirect costs. The former includes medical care and medico-legal costs; the latter refers to the earnings lost due to permanent disability or premature mortality. Specifically, direct medical care costs include hospital costs and inpatient physician costs for people who attempted suicide and are admitted to the hospital. Medico-legal costs for completed suicides include the cost of autopsies

[12] Studies have found a higher-than-average suicide rate among the poorest in the population. However, in his classic study, Durkheim (1951) argued that poverty protects people against suicide, while wealth makes people inclined to commit suicide because the rich believe that they have to depend on themselves alone (Ruzicka 1995, 96).

and legal investigations (Palmer et al. 1995). The indirect cost of suicide is based on both years of productive life lost and the corresponding estimated present value of lifetime earnings.[13]

While unemployment is the most common economic risk factor for adult suicides, promoting full employment, and thus job security (along with price stability), is one goal of the government in the United States, mandated by the Employment Act of 1946. The discretionary policy usually enacted is to reduce unemployment if cyclical unemployment is excessive. A successful countercyclical policy thus provides a beneficial externality that unintentionally may prevent suicide. Any other institutions or social networks that are established to promote or enhance physical or mental health can be considered as beneficial to the well-being of citizens and so help prevent suicide.

However, unintended detrimental impacts on suicide can be found in some segments of the population. For instance, one of the factors that appear to trigger rising suicide rates among African American adolescents results from restrictions on public assistance programs![14] Specifically, a family with a male over the age of eighteen living in the household is disqualified from receiving public assistance. This restriction leads to the absence of the father and father figures from the home, leaving African American adolescents with fewer resources to help them cope with complex economic and social changes and, therefore, more vulnerable to suicide (Willis et al. 2002, 912).

Another detrimental impact from public policy may be the reversal of the policies that have protected older workers from the risk of suicide. In his study of twenty countries, Taylor (2003) found that among older workers, unemployment and suicide rates are found to be largely unrelated.[15] His explanation is that some countries have permitted older workers to retire early in recent decades via generously funded retirement benefits. In addition, disability and unemployment programs in many countries have offered early retirement benefits well before the official retirement age. However, these early retirement "pathways" are now under challenge in developed countries due to concerns over the aging population and related pension financing issues (Taylor 2003). Thus, it is very likely that policy makers will consider increasing the official retirement age, cutting down on pension benefits, or both. In doing so, not only would

[13] Palmer and colleagues (1995) reported three different measures of the impact of suicide: lives lost, years of life expectancy lost (YLL), and years of productive life lost (YPLL, defined as the expected number of years of life lost up to the age of 65). They provide data for the costs of suicide for 1980. Another indirect cost of suicide that is rarely taken into account in the scholarly literature is the lost production of survivors and their medical costs due to grieving. Survivors are family members and friends of a loved one who died from suicide. According to McIntosh (2003), every suicide is estimated to affect intimately at least six other people. Based on the roughly 742,000 suicides in the United States from 1977 through 2001, the total number of survivors is estimated to be 4.45 million. It might not be easy to estimate the economic cost incurred by the grieving process of these survivors, but the amount may be significant.

[14] According to Gunnell and colleagues (2003, 608), there are general risk factors for suicide that underlie the recent rise of youth suicide, such as increases in unemployment, divorce (of their parents), and substance abuse. Some of these factors might act as "markers for more profound changes in the fabric of society that are affecting young people." For instance, Whitley and colleagues (1999) reported that the greatest rises in youth suicide occurred in the areas of Britain that had experienced the greatest increases in social fragmentation. While social fragmentation was also cited by Willis and colleagues (2002) as one factor making individuals more vulnerable to suicide, they claimed that "economic strain, the burgeoning drug trade and subsequent gun availability" (913) all have an impact on the suicide rates of African American adolescents.

[15] According to Taylor (2003), Japan and the United States are among the exceptions.

older workers lose the option of early retirement, they would also be forced to compete in an ever more disadvantageous labor market. The resulting psychological toll on older workers might make them more vulnerable to suicide (Taylor 2003).

There is one more possible impact of an aging population. As a growing aged population competes for national health *care* with the younger population, the quality of health care may suffer, especially for those who do not have private pensions or savings to supplement their Medicare coverage. Since research has showed that improved health care for older people is associated with a lower suicide rate (Gunnell et al. 2003), an impoverished health care service would not be helpful in preventing suicide in the elderly.[16]

Lastly, a better understanding of suicidal behavior may generate public policy suggestions to prevent suicide. For example, Yaniv (2001), after illustrating how the fear of hospitalization may deter suicide attempters from asking for help, makes several suggestions for preventing suicide, such as measures geared toward providing access to beneficial therapy and toward increasing public awareness about this access, and measures to reduce the fear of hospitalization.

Finally, all public policy has a broad impact on society. Thus, enactments of public policies, especially economic policies, should take into account their social impact as part of deciding their feasibility, a position long advocated by Yang and Lester (1995; Lester and Yang 2003).

In the distant past, economists interested in suicidal behavior focused primarily on estimating the costs of suicide due to legal and insurance concerns. The application of economic theories to understanding suicide began only thirty years ago. This essay will review economic theories and concepts exploring suicide, including those developed by the present authors, with the intention of outlining a future research agenda for economists. A review of empirical studies is not within the scope of this essay.

Attempted suicide is included in this essay for two reasons. First, attempted suicide is more prevalent than completed suicide, especially among the young. Second, economists have developed some game-theoretical approaches to understanding attempted suicide (Yaniv 2001; Rosenthal 1993), which will be discussed in the following section. Even though there are no official American national data on attempted suicide, McIntosh (2003) has compiled the following estimates about suicide attempts in this country, which indicate that attempted suicide involves and has an impact on a greater segment of society than does completed suicide.

1. There are twenty-five attempts for every completed suicide in America, a ratio about 4:1 for the elderly and ranging from 100:1 to 200:1 for adolescents.
2. The annual number of suicide attempts is estimated to be about 765,000.
3. Five million living Americans are estimated to have attempted suicide.
4. Gender difference exist, with roughly three times more attempts made by females than by males.

[16] The other factors that Gunnell and colleagues (2003) found to be associated with elderly suicide in England and Wales include an increase in GDP and inadequate antidepressant prescribing.

The economic analysis of suicidal behavior, both completed and attempted, can be classified into two levels, namely, the micro/individual level and the macro/societal level. An example of the latter is the business cycle theory of suicide developed by Lester and Yang (1997), but since it is the mathematical reformulation of three sociological theories of suicide, it will not be included in this essay.[17] The majority of economic analyses of suicidal behavior are based on individual behavior, and these will be discussed in the following section. They use either a conventional utilitarian framework based on rational choice concepts (Hamermesh and Soss 1974; Yeh and Lester 1987; Huang 1997; Dixit and Pindyck 1994; Marcotte 2003) or a behavioral approach (McCain 1997; Yaniv 2001; Rosenthal 1993). The behavioral approach to suicidal behavior is a recent development that incorporates emotions, ethics, and socialization (McCain 1997) or applies a game-theoretical approach (Yaniv 2001; Rosenthal 1993) to explore the minds of suicidal individuals

Economic Models of Suicidal Behavior and Suicide Prevention

Economists do not judge whether suicide is wrong, immoral, or a deviant act. In most economic models for suicide, suicide is treated a result of rational choice. Individuals are acting "rationally" if, given a choice between various alternatives, they select what seems to be the most desirable or the least undesirable alternative.

Up to the present time, economic analysis has been applied to explore several aspects of suicidal behavior: completed suicide, attempted suicide, suicide prevention, and the irrationality of suicide.

For completed suicide, the economic models include a cost-benefit analysis (Yeh and Lester 1987), a lifetime utility maximization framework (Hamermesh and Soss 1974), and the analogy of entering the labor force (Huang 1997). For attempted suicide, the models include an expanded lifetime utility maximization model (Marcotte 2003) and a game-theoretical framework to explore the incentive to attempt suicide without actually intending to die (Rosenthal 1993). For suicide prevention, Yeh and Lester (1987) used a basic demand-and-supply analysis to justify external intervention for suicide, while Yaniv (2001) applied a simple game-theoretical framework to estimate the role of help-seeking incentives in preventing suicide. Regarding the "irrationality" of suicide, Becker's (1962) notion of irrationality and its link to suicide was discussed by Lester and Yang (1991b).

Economic Approaches to Completed Suicide

[17] The mathematical model for the business cycle theory of suicide can be found in Lester and Yang (1997) and Lester (2001). This model provides the theoretical foundation for a series of empirical studies that the authors have published in the field of suicidology, some of which are included in Lester and Yang (1997). The model establishes the basis for the inclusion of economic variables along with social variables in empirical studies of the suicide rate. One interesting finding from the reformation is the possibility of a natural rate of suicide, that is, the existence of a nonzero, positive suicide rate under normal economic conditions. We found that the natural rate of suicide in the United States based on 1980 and 1990 census data is about 6 per 100,000 people. Other researchers (e.g., Kunce and Anderson 2001-2) tested this hypothesis with various economic techniques and estimated that the natural rate of suicide was lower than 6 but still positive.

Cost-Benefit Analysis

Yeh and Lester (1987) suggest that the decision to commit suicide depends upon the benefits and costs associated with suicide and with alternative actions. An individual will be less likely to commit suicide if the benefits from suicide decrease, the costs of suicide increase, the costs of alternative actions decrease, or the benefits from alternative activities increase.

The benefits from suicide include escape from physical or psychological pain (as in the suicide of someone dying from terminal cancer), the anticipation of the impact of the suicide's death on other people (as in someone who hopes to make the survivors feel guilty), or restoring one's public image (as in the suicide of Antigone in Sophocles's play of the same name). In addition, those who self-injure by cutting their wrists sometimes report that the act of cutting relieves built-up tension and that they feel no physical pain.

There are several costs in suicide. These include the money and effort spent in obtaining the information and equipment needed for the act of suicide, the pain involved in preparing to kill oneself and in the process suicide, the expected loss as a result of suicide such as the expected punishment predicted by most of the major religions of the world, and the opportunity costs (that is, the net gain to be expected if alternative activities were chosen and life continued).

From this perspective, an individual will engage in suicidal only if its benefits are greater than all of the costs mentioned above. Therefore, a cost-benefit economic model would suggest that suicide could be prevented by increasing its costs or by decreasing its benefits.

Lifetime Utility Maximization Model

The economic theory of suicide developed by Hamermesh and Sass (1974) is based on a lifetime utility function that is determined by the permanent income and the current age of the individual. The permanent income is the average income expected over a person's lifetime. Thus, the opportunity cost of suicide is the forgone earnings in the rest of one's life.

The permanent income and the current age of an individual determine the consumption level from which an individual will derive satisfaction. The current age also determines the cost of maintaining the day-to-day life of the individual, which is a negative attribute of the utility function.

A third element of the economic attributes of suicide is the taste for living or distaste for suicide, which is assumed to be a parameter normally distributed with a zero mean and constant variance**.** When the total discounted lifetime utility (which includes the taste for living) remaining to a person reaches zero, an individual will commit suicide.

This economic model of suicide contains the following assumptions: (1) the older the current age, the lower the total satisfaction, because the cost of day-to-day living increases with age; (2) the greater the permanent income, the higher the total satisfaction, since a higher income level warrants a higher consumption level. However, the additional satisfaction brought forth by additional income decreases with higher income.

Based on this lifetime maximization framework for suicide, several predictions can be derived. First, the suicide rate will increase with age. Since the marginal utility of lifetime income decreases with increased permanent income, the older an individual gets, the less additional satisfaction he is going to derive from consumption. This should increase the probability that the person will commit suicide.

Second, the suicide rate will be inversely related to permanent income. If an individual receives a greater amount of lifetime income, he is expected to have a greater amount of consumption and, therefore, a greater satisfaction from life. This should decrease the probability of suicide.

A later study by Crouch (1979) follows the same line as that of Hamermesh and Soss. Crouch began with the premise that an individual will commit suicide if the sum of his enjoyments from life *(E)* and his distaste for suicide *(D)* falls to or below zero, that is, when $E + D < 0$. Enjoyment for life depends upon the full income of the individual and loved ones and their living expenses that are a function of the individual's age. Several propositions are derived accordingly:

1. As the full income of the individual and/or his loved ones increases, the probability of suicide decreases and vice versa.
2. The higher the living expenses, the less the life enjoyment for the individual and so the greater the tendency to commit suicide.
3. The more religious the individual is, the more distasteful suicide will seem, and so the less likely he will be to commit suicide. (Crouch focused on the influence of Catholicism for his religious variable.)
4. Divorce (especially divorce that is opposed by the individual) and widowhood increase the likelihood of suicide because they decrease the full income of the family.

It can be seen that Crouch's formulation of suicidal behavior is based entirely on Hamermesh and Soss's idea of utility maximization, except that Crouch defines income differently than Hamermesh and Soss (but fails to give a complete definition) and includes income from the individual's loved ones.

A Labor-Force Entrance Analogy

Applying economic analyses of the decision to enter and leave the labor market to suicidal behavior, Huang (1997) conceptualized suicide as a decision to enter or leave the "life market." This decision to leave the life market will be based on utility maximization, where utility is derived from various aspects of the worth or value of life above and beyond income, such as love, health, fame, beauty, fun, adventure, prestige, respect, and security. This life income has to be earned, and it is a struggle to gain some of these rewards. Obtaining them requires a great deal of hard labor *(L).*

The opposite of work is leisure, including rest and relaxation *(R),* which entails letting go of pressure and responsibility. The ultimate maximum manifestation of leisure is complete and permanent rest--that is, death. In other words, labor measures the extent of effort and resolve to live while

leisure measures its lack. Furthermore, the expected market rate wage (W) can be treated as the perceived opportunity or ability to earn life income for a unit of life effort.

Two solutions are possible. Most people will choose an interior solution, choosing to live with a varying amount of effort. Unfortunately, some will be unable to find an interior solution, and they may choose to drop out of the life market, that is, commit suicide, analogous to discouraged workers dropping out of the labor market.

What leads to the decision to terminate one's life? In this framework, people decide to drop out of the life market if the perceived obtainable wage in the life market falls short of some minimally acceptable level, perhaps as a result of a terminal disease, recurring depression, business fiasco, or public humiliation. Less likely, the decision to commit suicide can also be caused by an increase in the reservation wage. An individual, wealthy in the sense of life, may need more to keep life exciting and challenging. Having so much of everything, his utility from life diminishes, and he may become tired of life. Given a much higher reservation wage than the average person, and without a matched increase in perceived wage, the individual may find the corner solution desirable and choose to commit suicide.

Huang concluded that, in this perspective, suicide is not irrational. However, suicide may not be the correct solution, especially because there are uncertainties about many aspects of the future, and life market information is always incomplete and imperfect. In the model, W was the *perceived* expected wage from living, and the individual's perception may be erroneous owing to misinformation, misinterpretation, and/or miscalculation. Erroneous perceptions may lead to a suicide decision that is not totally rational.

There are some implications for suicide prevention here. During the decision-making process, the individual's decision to commit suicide may be reversed if he or she is given more objective information through proper counseling.

Economic Approach to Suicide Attempts

Suicide Attempts as a Means to Improve Future Utility

Marcotte's (2003) focus on suicide attempts was stimulated by data from the National Comorbidity Survey that provided information about mental illness and suicidal behavior for a sample of 5,877 Americans. In his lifetime utility-maximizing framework, Marcotte proposed how suicide attempters can affect their future utility in two ways. First, future health and maintenance costs may be higher if the suicide attempt results in physical injury and permanent disability. Second, the suicide attempt may be used as a means of improving future consumption via eliciting more attention and care for oneself.

Thus, Marcotte surmised that there are expected gains and risks associated with suicide attempts. While the gains arise from ¯modifications to the utility function" due to the attempt, the risk is due to a shift in the ¯probability of realizing future consumption." Thus, the suicide is attempted if "the subsequent effect on utility exceeds the attempter's distaste for the attempt itself and the associate risk" (Marcotte 2003, 630).

Marcotte's formulation leads to several predictions. First, people with a higher expected income will be less inclined to attempt suicide. This prediction is consistent with Hamermesh and Soss's model. Second, a more novel implication is that the propensity to attempt suicide increases if the expected utility can be improved, such as if the act elicits "sympathy or resources" from others. Thus Marcotte proposed that if suicide attempts are used as a mechanism to enhance future utility via consumption, then people who attempt suicide and survive should fare better (for example, earn a higher income) than counterparts who contemplated suicide but never made an attempt (Marcotte 2003, 633).

Suicide as Investment Under Uncertainty

Dixit and Pindyck (1994) examined the nature of investment under conditions of uncertainty. Although their book focused on the investment decisions of firms, they noted that other decisions are made with the same conditions as investments: the decision is irreversible, there is uncertainty over the future rewards of the decision, and there is some leeway over the timing of the decision.

Dixit and Pindyck suggested that suicide fits these criteria. They noted that Hamermesh and Soss (1974) had proposed that individuals will commit suicide when the expected value of the utility of the rest of their life falls short of some benchmark (or down to zero). Dixit and Pindyck argued that Hamermesh and Soss failed to consider the option of staying alive. Suicide is irreversible, and the future is quite uncertain. Therefore, the option of waiting to see if the situation improves should be a likely choice. Even if the expected direction of life is downward, there may still be some nonzero positive probability that it will improve. Because of this consideration, Dixit and Pindyck's approach seems to fit attempted suicide better than completed suicide.

Dixit and Pindyck speculated that suicides project the bleak present into an equally bleak future. They ignore the uncertainty of the future and the option value of life. In this respect, Dixit and Pindyck saw suicides as irrational. They noted that religious and moral proscriptions against suicide compensate to some extent for this failure of rationality. These proscriptions raise the perceived cost of suicide and lower the threshold of the quality of life that precipitates suicide.

Suicide Attempts as a Signaling Game

Rosenthal (1993) focused on suicide attempts that have a chance of survival, that is, suicide attempts of moderate severity where the individual is "gambling" with the outcome. He suggested that the suicide attempt can be seen as a credible signal intended to manipulate the behavior of the receiver (spouse, psychiatrist, etc.) in a way favorable to the sender. As such, it resembles a game, even though the individuals in this model have "classical von Neuman-Morgenstern preference and are not risk-lovers" (Rosenthal 1993, 26).

In this perspective, the sender may be either depressed or normal, and it is assumed that the players know the respective probabilities of these two possibilities. The sender knows his type, while the receiver does not. The sender chooses an attempt (signal) strength that determines whether he or

she survives. The receiver then chooses a sympathetic or unsympathetic response. If he could distinguish the types perfectly, the receiver would prefer to respond sympathetically to a depressed sender and unsympathetically to a normal sender. From senders' perspective, they would prefer a sympathetic response, but the preference is stronger in the depressed sender.

The signaling game employed by Rosenthal was a refined version of the Nash equilibrium concept, for the original one often generates several Nash equilibria that are for the most part unreasonable ones (Rosenthal 1993, 273). By using the refined Nash equilibrium concept, Rosenthal was able to draw two conclusions. First, gambling-type suicidal behavior would be less common if the suicidal individual strongly desires a sympathetic response. Second, if the receiver is very likely to give a sympathetic response, then depressed senders are less likely to engage in gambling-type suicidal behavior.

Economic Models of Suicide Prevention

A Demand-and-Supply Analysis of Suicide and Suicide Prevention

By treating suicide as a service that we purchase in the "market," Yang and Lester (Yeh and Lester 1987; Lester and Yang 1997) developed a demand-and-supply analysis of suicide. They concluded that suicide is a behavior with an unstable equilibrium, so if there is an external intervention, suicide can be prevented.

From a demand-side perspective, when we purchase a product, the price we pay for the product reflects the marginal benefits we expect to receive from consuming that product. In the "purchase" of suicide, the notion of its "price" is different from the ordinary price of a commodity. The benefit expected by a suicide is the relief of tremendous distress. Accordingly, we must use a scale of distress to measure the benefit expected by the suicidal individual. This benefit expected by the suicidal individual is reflected in the price he must pay for his suicide.

Accordingly, the demand curve is a relationship presumably indicating the probability of suicide as a function of the amount of distress felt by the individual. As the amount of distress increases, the probability of suicide increases. The demand for suicide is, therefore, an upward-sloping curve, which is quite different from the typical downward-sloping demand curve found in most economic analyses.

On the supply side, the probability of suicide is related to the cost of suicide. The cost of suicide includes the cost of losing one's life, collecting information about how to commit the act, purchasing the means for suicide, and so on. While the latter two items have a clear-cut scale of measurement, the cost of losing life is much harder to measure. It includes at least three components, namely, the psychological fear of death, the loss of income in the future that otherwise would have been earned by the suicide, and the loss of any enjoyment that would be experienced during the rest of one's normal life.

The higher the cost of suicide, the lower the probability that an individual will actually kill himself. Therefore, the supply curve should be a downward-sloping curve rather than the regular upward-sloping shape expected for most products.

It is important in such a demand-supply analysis of suicide to convert the psychological variables (level of distress and future pleasure) into measures comparable to monetary units, so that an equilibrium can be obtained through equating the demand and supply for suicide. One way to measure the level of distress is to operationalize it as the cost of the psychological services required to eliminate the distress that the suicidal person is experiencing.[18]

Since both the "price" and the "cost" of suicide are plotted against the probability of suicide, the demand curve is an upward-sloping curve and becomes vertical when the probability of suicide is equal to 1. The price level for suicide that corresponds to the point where the probability is equal to 1 refers to the threshold level of distress that an individual can no longer tolerate. In this situation, suicide becomes inevitable. The supply curve of the suicide intersects with horizontal axis at zero cost with certainty (a probability of 1).

At equilibrium, suicide is determined by the intersection of the supply and demand curves. Due to the peculiar nature of the demand and supply of suicide, the equilibrium so obtained is not a stable one. That is to say, any slight chance that the suicidal individual deviates from equilibrium could result in movement away from the equilibrium. However, there is one situation that is more interesting from the suicide prevention perspective.

If the probability of suicide is initially at a level slightly lower than the equilibrium probability, this corresponds to a low level of distress from the demand-side perspective and a high cost of suicide from the supply-side perspective. As a result, the situation will lead to an even lower probability of suicide, and the individual will eventually withdraw from the suicidal situation.

Therefore, this demand-and-supply analysis of suicide implies that there is the opportunity for crisis intervention to be successful. Technically, this means shifting either the demand or the supply curve to the left or a combination of both. It turns out it is much easier to work on the supply-side factor.

Yeh and Lester examined some of the factors that contribute to the decision to commit suicide based on a review of the research on suicide by Lester (1983). They noted that most of the factors, such as psychiatric disturbance, gender, age, and dysfunctional family of origin, are reasonably stable characteristics. Thus, once the demand curve is formed, it will remain quite stable over time. Sudden shifts in the demand curve might be caused by events such as the sudden deaths of significant others, illness, or work difficulties, but the extent of the shifts may be quite limited.

Help-Seeking Incentives to Suicide Prevention

[18] This is complicated by the fact that mental health services are not always effective. Some people do not benefit from treatment. This could be taken into account by incorporating the probability of success of the treatment into the calculations as a multiplier of the cost of treatment. Converting future pleasure from life into monetary units is more difficult. One alternative could be to convert all of the components of the cost into subjective units, based on the ratings given by representative members of society.

Suicide prevention is the primal goal of public health policy regarding suicide. There are four strategies to prevent suicide: (1) long-term treatment of individuals via medication (Roy 2001) or psychotherapy (Ellis 2001), (2) crisis intervention (Mishara and Daigle 2001), (3) restricting access to lethal methods (Clarke and Lester 1989), and (4) school education programs (Leenaars 2001). Each strategy competes for the society's resources in achieving the same goal.

The game-theoretical approach developed by Yaniv (2001) focuses on crisis intervention. In Yaniv's game-setting model, the suicide attempter (patient), contemplating the two outcomes (suicide or seeking last-minute help), interacts with a mental health practitioner (therapist) deciding between two options for preventing suicide (providing ambulatory crisis-intervention therapy or protective hospitalization). Yaniv made certain assumptions about the behavioral characteristics of the two players. When seeking last-minute help, suicide attempters may fear being hospitalized, while the mental health practitioner is a "cost-oriented social welfare agent" and may choose the less costly ambulatory crisis therapy over hospitalization. Thus, the suicide attempter faces the risk of involuntary hospitalization, and the practitioner encounters the risk of the resulting suicide. Ultimately, the practitioner bases his decision on the likelihood of a genuine suicide threat in order to "minimize society's expected loss from suicide and suicide-prevention efforts." (Yaniv 2001, 464)

Yaniv derived two results from his model. First, if the hospitalization decision is exogenous to the patient's problem, then involuntary hospitalization constitutes an effective deterrent to seeking help by the suicide attempters. Second, when the model allows for therapist-patient interaction, the "disincentive role of the hospitalization subsides" (Yaniv 2001, 463). In other words, because either the ambulatory crisis therapy is highly successful or the fraction of genuinely suicidal patients and strategic therapists in the "market" is relatively small, the threat of involuntary hospitalization would cease to become an effective deterrent to seeking help. In addition, the patient becomes more inclined to ask for help when the probability of therapy success increases even though the therapist's tendency to hospitalize rises.

Some plausible suggestions for public policy to prevent suicide include measures geared toward successful therapy and increasing public awareness about it, plus measures to reduce the fear of hospitalization. Even though restricting the power of therapists may help ease the fear of hospitalization, legally enforcing it seems counterproductive in the practice of preventing suicide, especially considering that the condition of the patient may call for hospitalization. It might be against the ethical code of conduct on the part of therapists not to hospitalize an acutely suicidal patient.

Becker on Irrationality

Economists define rational behavior as maximizing some variable such as utility or profit. Irrational behaviors are the rare find among the subjects analyzed by economists. Becker (1962) defined two types of irrational behavior: random, erratic, and whimsical choices, and perseverative choices in which the person chooses what he or she has always chosen in the past. Lester and Yang (1991b) argued that these two types of irrational behavior parallel the major typology of suicidal behavior, in which suicidal behavior is seen as a time-limited impulsive crisis or as a chronic maladaptive pattern.

The vast empirical literature on suicide from the past hundred years has been reviewed by Lester (2000). The research most pertinent to the behavioral economics of suicide concerns the cognition of suicidal individuals—is the thinking rational or irrational? The thinking among those who survive attempts at suicide clearly has shown several distinctive features compared to that of nonsuicidal individuals. Suicide attempters tend to be rigid in their thinking, to think dichotomously (that is, in black-and-white terms, with polarized views of themselves, life and death), and to be pessimistic and hopeless about the future (Hughes and Neimeyer 1990). These are the types of cognition that cognitive therapists label as irrational (Burns 1981). Thus, cognitive therapists try to get their clients to monitor and challenge these irrational thoughts regularly and convert them to more rational thoughts.

It should be noted that irrational thinking differs from illogical reasoning. Thinking irrationally does not imply an inability to reason logically. Research has found no evidence that suicidal individuals have deficits in their ability to reason logically (Lester 2003). One component of irrational thinking concerns the validity of the premises (or assumptions) that individuals use in their reasoning, and there is a debate over whether the premises of suicidal individuals are rational. For example, if an individual who has been fired from a job says, "I will never be successful in my career," it can be argued that there is no evidence for that premise. The word *never is* too extreme. On the other hand, if an individual says, "My physical [or mental] pain is too great for me to tolerate," there is no evidence to refute such a premise because pain is subjective. Lester (2003) argued, therefore, that the decision to commit suicide can be rational, and he provided guidelines for individuals making such a decision.

Conclusion

There are several reasons why economic models will be useful in understanding suicide and in preventing suicide. First, suicide is a matter of choice. Second, suicidal behavior clearly incurs economic costs. Third, the economy has an impact on suicidal behavior, with economic downturns increasing the risk of suicidal behavior, at least in the wealthiest nations. Other economic factors, such as real income per capita, poverty, and income distribution, are also associated with the suicide rate.[19]

Fourth, established public policies have both positive and negative impacts on the social and economic environment that are related to the suicide rate. For instance, economic policies, including automatic stabilizers such as unemployment compensation and discretionary fiscal or monetary policies that are used to fine-tune the business cycle by lowering the unemployment rate, indirectly mitigate the hostile environment conducive to suicide. Early retirement programs, social security, or pension systems and disability programs that allow elderly workers to enjoy early retirement may help increase the well-being of the elderly, thereby reducing the detrimental factors that might trigger their suicidal behavior. Thus, when the financial crisis in the social security program due to the smaller number of workers supporting a larger generation of aging

[19] There are numerous empirical studies that have documented the association between the suicide rate and these economic factors. Interestingly enough, one recent econometric study used fixed effect estimations to challenge the significance of socioeconomic factors (Kunce and Anderson 2002), while Neumayer (2003) refuted the association with empirical findings from both fixed and random effect estimations.

and elderly arrives, the problem might be solved by postponing the retirement age and reducing benefits. The detrimental impact of these changes in policy on the elderly should be reflected in their suicide rate.

Other public policies that have been documented that inadvertently create a fertile environment for suicide include the stipulation of restricting the presence of adult males in households in order to receive welfare assistance. This stipulation, which removed fathers and father figures from the home, was cited as one of many factors associated with the rising suicide rate among African American youth.

There are two further issues related to public policy. By understanding the motivation behind suicidal behavior, some suggestions can be made for policies that prevent suicide. For example, after illustrating how fear is behind the hesitation of suicide attempters asking for help at the last minute, Yaniv (2001) was able to offer suggestions for preventing suicide. The other issue concerns the enactment of public policy in that the social costs of any economic policy should be taken explicitly into account (Yang and Lester 1995; Lester and Yang 2003), be they positive or negative, so that there will be no unexpected impact on the community either at large or on certain segments of the population, as in the case of the restricting welfare policy on young African Americans.

This essay has focused on economic analyses or models of suicide that have been developed since the 1970s. These include those based on the rational choice model and behavioral models, and they have addressed completed suicide, attempted suicide, and suicide prevention. Those models based on the rational choice model have limitations. They do not incorporate the interactions between the suicidal individuals and their families or the other actors in their life who are crucial to their decision of suicide, such as their therapists. The two behavioral models that used a game-theoretical approach do endogenize the interaction due to the nature of the approach—the game entails two players.

This suggests areas to which future research by economists may contribute. Suicide does not occur in a vacuum; it is the result of lifelong experiences, including interactions with other people. Therefore, social factors and social behavior should be a part of the unified model that captures the multifactorial nature of suicide. This is where sociology (which studies social networks, society, and culture) can come into play. The concept of social capital developed by Becker (1996) may be a good start for models based on rational choice. Another concept developed by sociologists that may be relevant to modern society and conducive to suicidal behavior is anomie. Anomie, according to Bulmahn (2000, 375), may be defined as a distinctive structural feature of modem societies whose destructive consequences are manifested by "growing alienation, increasing social isolation and rising suicidality." It would be interesting to conceptualize an economic model of suicide that captures the essence of anomie, which reflects the dark side of economic progress and development and can be destructive for some human beings.

Second, in pursuit of this multifactorial economic model, it would be useful to incorporate disciplines such as psychology. For instance, Mathur and Freeman (2002) developed an economic model of parental behavior based on the traditional utilitarian framework

that incorporates a home production function of mental health as a way to explain how parents' employment might affect the mental health of their offspring. It is a fine model that is one of the first to incorporate the parent-offspring interaction, but unfortunately for our purposes it does not have great relevance for suicide. Since official data for youths are not available, we will use adult data as an illustration. According to results from the National Comorbidity Survey, 19.3 percent of the population has an affective disorder (depression) at some point in their life (Kessler et al. 1994). Among those depressed individuals, up to 15 percent eventually commit suicide (Achte 1986). If we use these two statistics, the link between depression and suicide will impact less than 1 percent of the total population. Thus, Mathur and Freeman's model is not adequate as a model of suicide, contrary to their assertion.

While rational choice models might incorporate social interactions into the framework, there are other behavioral dimensions that can be added. For instance, the notion of bounded rationality may have some relevance to the decision to commit suicide. If suicidal individuals are keenly aware of the possibility of disfigurement and permanent disability should the suicide attempt fail, would this affect their decision? Why does the fear of death not play a role in suicide while the loathing of life does? In other words, there are many emotions and desires that should be explored in explaining suicidal behavior, avenues that may enrich the behavioral economic approach to the study of suicide in the future.

References

Achte, K. 1986. "Depression and Suicide." *Psychopathology* 19, supp. 2: 210-14.

Al-Ansari, Ahmed M., Randah R**.** Hamadeh, Ali M. Matar, Huda Marhoon, Bana Y. Buzaboon, and Ahmed G. Races. 2001. "Risk Factors Associated with Overdose Among Bahraini Youth." *Suicide and Life-Threatening Behavior* 31, 2: 197-206.

Becker, Gary S. 1960 "An Economic Analysis of Fertility." In Universities-National Bureau Committee for Economic Research, *Demographic and Economic Change in Developed Countries.* Princeton, NJ: Princeton University Press.

. 1962. "Irrational Behavior and Economic Theory." *Journal of Political Economy* 70: 1-13.

. 1968. "Crime and Punishment: An Economic Approach." *Journal of Political Economy* 76: 169-217.

. 1976. *The Economic Approach to Human Behavior,* vol. 3. Chicago: University of Chicago Press.

. 1996. *Accounting for Tastes.* Cambridge, MA: Harvard University Press.

Becker, Gary S., and Kevin Murphy. 1988. "A Theory of Rational Addiction." *Journal of Political Economy* 96: 675-700.

Birckmayer, Johanna, and David Hemenway. 2001. "Suicide and Firearm Prevalence: Are Youth Disproportionately Affected?" *Suicide and Life-Threatening Behavior* 31, 3: 303-10.

Bourdieu, P., and James S. Coleman. 1991. *Social Theory for a Changing Society.* New York: Russell Sage Foundation.

Brainerd, Elizabeth. 2001. "Economic Reform and Mortality in the Former Soviet Union: A Study of the Suicide Epidemic in the 1990s." *European Economic Review* 45: 1007-19.

Bulmahn, Thomas. 2000. "Modernity and Happiness: The Case of Germany." *Journal of Happiness Studies 1:* 375-400.

Burns, D. 1981. *Feeling Good.* New York: Signet.

Christoffersen, M.N., H.D. Paulsen, and A. Nielsen. 2003. "Attempted Suicide Among Young People: Risk Factors in a Prospective Register Based Study of Danish Children Born in 1966." *Acta Psychiatrica Scandinavica* 108: 350-58,

Coleman, James, S. 1990. *Foundations of Social Theory.* Cambridge, MA: Harvard University Press.

Coleman, James, S., and T.J. Fararo. 1991. *Rational Choice Theory.* Newbury Park, CA: Sage.

Congdon, Peter. 1996. "Suicide and Parasuicide in London: A Small-Area Study." *Urban Studies* 33,1: 137-58.

Crawford, M.J., and M. Prince. 1999. "Increasing Rates of Suicide in Young Men in England During the 1980s: The Importance of Social Context." *Social Science and Medicine* 49: 1419-23.

Crouch, R. 1979. *Human Behavior.* North Scituate, MA: Duxbury.

Dixit, AK., and R.S. Pindyck. 1994. *Investment Under Uncertainty.* Princeton: Princeton University Press.

Durkheim, Emil. 1951. *Suicide: A Study in Sociology,* trans. J.A. Spaulding and G. Simpson. New York: Free Press.

Eckersley, Richard, and Keith Dear. 2002. "Cultural Correlates of Youth Suicide." *Social Science and Medicine 55:* 1891-904.

Ellis, Thomas. 2001. "Psychotherapy with Suicide Patients." In David Lester, ed., *Suicide Prevention: Resources for the Millennium,* 129-51. Philadelphia: Brunner-Routledge.

Fedden, H.S. 1938. *Suicide: A Social and Historical Study.* London: Peter Davies.

Freeman, Donald G. 1998. "Determinants of Youth Suicide: The Easterlin-Hollinger Cohort Hypothesis Re-examined." *American Journal of Economics and Sociology* 57: 183-99.

Gerdtham, Ulf-G., and Magnus Johannesson. 2003. "A Note on the Effect of Unemployment on Mortality." *Journal of Health Economics* 22: 505-18.

Gunnell, David, Nicos Middleton, Elise Whitley, Daniel Dorling**,** and Stephen Frankel. 2003. "Why Are Suicide Rates Rising in Young Men but Falling in the Elderly? A Time-Series Analysis of Trends in England and Wales 1950-1998." *Social Science and Medicine* 57: 596-611.

Hamermesh, D.S., and N.M. Soss. 1974. "An Economic Theory of Suicide." *Journal of Political Economy* 82: 83-98.

Hicks, John. 1979. *Causality in Economics.* New York: Basic Books.

Huang, Wei-Chiao. 1997. "'Life Force' Participation Perspective of Suicide." In David Lester and Bijou Yang, eds., *The Economy and Suicide: Economic Perspectives on Suicide,* 81-89. Commack, NY: Nova Science.

Hughes, S.L., and R.A. Neimeyer, 1990. "A Cognitive Model of Suicidal Behavior." In D. Lester, ed., *Current Concepts of Suicide,* 1-28. Philadelphia: Charles Press.

Jungeilges, Jochen, and Gebhard Kirchgassner. 2002. "Economic Welfare, Civil Liberty, and Suicide: An Empirical Investigation." *Journal of Socio-Economics* 31: 215-31.

Kessler, Ronald C., Katherine A, McGonagle, Shanyang Zhao, Christopher B. Nelson, Michael Hughes, Suzann Eshleman, Hans-Ulrich Wittchen, and Kenneth S. Kendler. 1994. "Lifetime and 12-Month Prevalence of DSM-III-R Psychiatric Disorders in the United States: Results from the National Comorbidity Survey." *Archives of General Psychiatry* 51: 8-19.

Kunce, Mitch, and April L. Anderson. 2001-2. "A Natural Rate of Suicide for the U.S., Revisited." *Omega* 44: 215-22.

. 2002. "The Impact of Socioeconomic Factors on State Suicide Rates: A Methodological Note." *Urban Studies* 39, 1: 155-62.

Leenaars, Antoon A. 2001. "Suicide Prevention in Schools: Resources for the Millennium." In David Lester, ed., *Suicide Prevention: Resources for the Millennium,* 213-35. Philadelphia: Brunner-Routledge.

Leenaars, Antoon A., Bijou Yang, and David Lester. 1993. "The Effect of Domestic and Economic Stress on Suicide Rates in Canada and the United States." *Journal of Clinical Psychology* 49: 918-21.

Lester, Bijou Yang. 2001. "Learnings from Durkheim and Beyond." *Suicide and LifeThreatening Behavior* 31: 15-31.

Lester, David. 1983. *Why People Kill Themselves.* Springfield, IL: Charles Thomas.

. 1988. *Suicide from a Psychological Perspective.* Springfield, IL: Charles Thomas.

. 1989. *Suicide from a Sociological Perspective.* Springfield, IL: Charles Thomas.

1991. *Psychotherapy for Suicide Clients.* Springfield, IL: Charles Thomas.

. 2000. *Why People Kill Themselves,* 4th ed. Springfield, IL: Charles Thomas.

. 2003. *Fixin' to Die.* Amityville, NY: Baywood.

Lester, David, Peter **S.** Curran, and Bijou Yang. 1991. "Time Series Regression Results of Suicide Rates by Social Correlates for the USA and Northern Ireland." *Irish Journal of Psychological Medicine* 8: 26-28.

Lester, David, Pricilla Wood, Christopher Williams, and Janet Haines. 2004. "Motives for Suicide: A Study of Australia Suicide Notes." *Crisis* 25: 33-34.

Lester, David, and Bijou Yang. 1991a. "The Relationship Between Divorce, Unemployment and Female Participation in the Labor Force and Suicide Rates in Australia and America." *Australian and New Zealand Journal of Psychiatry* 25: 519-23.

1991b. "Suicidal Behavior and Becker's Definition of Irrationality." *Psychological Reports* 68: 655-56.

, eds. 1997. *The Economy and Suicide: Economic Perspectives on Suicide.* Commack, NY: Nova Science.

. 2003. "Unemployment and Suicidal Behavior: The Role of Economic Policy." *Journal of Epidemiology and Community Health* 57: 558-9.

Marcotte, Dave E. 2003. "The Economics of Suicide, Revisited." *Southern Economic Journal* 69: 628-43.

Maris, Ronald W., Alan L. Berman, and Morton M. Silverman. 2000. *Comprehensive Textbook of Suicidology.* New York: Guilford.

Mathur, Vijay K., and Donald G. Freeman. 2002. "A Theoretical Model of Adolescent Suicide and Some Evidence from U.S. Data." *Health Economics 11:* 695-708.

McIntosh, John L. 2003. "Fact Sheet." American Association of Suicidology, http://www.suicidology.org. September 26.

Micklewright, John, and Kitty Stewart. 1999. "Is the Well-Being of Children Converging in the European Union?" *Economic Journal* 109: F692—F714.

Middleton, Nicos, David Gunnell, Stephen Frankel, Elise Whitley, and Daniel Dorling. 2003. "Urban-Rural Difference in Suicide Trends in Youth Adults: England and Wales, 1981—1998." *Social Science and Medicine* 57: 1183-94.

Mishara, Brian. and Marc Daigle. 2001. "Helplines and Crisis Interventions Services: Challenges for the Future." In David Lester, ed., *Suicide Prevention: Resources for the Millennium,* 153-71. Philadelphia: Brunner-Routledge.

Neumayer, Eric. 2003. "Socioeconomic Factors and Suicide Rates at Large-Unit Aggregate Levels: A Comment." *Urban Studies* 40: 2769-76.

Palmer, C.S., D.A. Revicki, M.T. Halpern, and E.J. Hatziandreu. 1995. "The Cost of Suicide and Suicide Attempts in the United States." *Clinical Neuropharmacology* 18, supp. 3: S25—S33.

Platt, Stephen D. 1984. "Unemployment and Suicidal Behavior." *Social Science and Medicine* 19: 93-115.

. 1986. ¯Parasuicide and Unemployment." *British Journal of' Psychiatry* 149: 401-5.

Platt, Stephen, Rocco Micchiolo, and Michele Tannsella. 1992. "Suicide and Unemployment in Italy: Description, Analysis and Interpretation of Recent Trends." *Social Science and Medicine* 34: 1191-201.

Pritchard, Collin.1988. "Suicide, Unemployment and Gender in the British Isles and European Economic Community (1974-1985)." *Social Psychiatry and Psychiatric Epidemiology* 23: 85-89.

Rosenthal. Robert W. 1993. ¯Suicide Attempts and Signalling Games." *Mathematical Social Sciences* 26: 25-33.

Roy, Alec. 2001. "Psychiatric Treatment in Suicide Prevention." In David Lester, ed., *Suicide Prevention: Resources for the Millennium, 103-27* . Philadelphia: Brunner-Routledge.

Ruzicka, Lado T. 1995. "Suicide Mortality in Developed Countries." In Alan D. Lopez, Graziella Caselli, and Tapani Valkonen, eds., *Adult Mortality in Developed Countries: From Description to Explanation,* 85-110. Oxford: Clarendon Press.

Shneidman, Edwin S. 1985. *Definition of Suicide.* New York: Wiley.

Shneidman, Edwin S., and Norman Farberow. 1957. *Clues to Suicide.* New York: McGraw-Hill.

Stack, Steven. 1990. "The Effect of Divorce on Suicide in Demark, 1951-1980." *Sociological Quarterly* 31: 359-70.

Taylor, Philip. 2003. "Age, Labor Market Conditions and Male Suicide Rates in Selected Countries." *Aging and Society* 23: 25-40.

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ANOMIC NATIONS AND SUICIDE RATES[20]

DAVID LESTER & BIJOU YANG

Abstract: The association between national levels of anomie and suicide rates was positive for a sample of European nations, but not for a more general sample of nations.

In his classic sociological theory of suicide, Durkheim (1897) proposed that the degrees of social integration and social regulation of individuals in a society determined the suicide rate of the society. In particular, low levels of social regulation resulted in what Durkheim called anomic suicide. Subsequently, the construct of anomie became a popular explanatory construct in sociology.

In a preliminary study of individuals, Lester (1970) administered Srole's (1956) 5-item anomie scale to college students and found that those who had attempted or threatened suicide in the past did not differ in their anomie scores. However, an index of *suicide potential* was positively associated with their anomie scores, and this association was replicated by Goldney, Winefield, Tiggeman, Winefield and Smith (1989) and by Schaller and Schmidtke (1995). At the societal level, however, researchers have not measured anomie directly, but inferred its impact. For example, the association between divorce and suicide rates over regions and over time is explained by assuming that divorced individuals have lower levels of both social integration and social regulation (Lester & Yang, 1998).

Recently, Zhao and Cao (2010) constructed a measure of anomie in 30 nations based on questions asked of respondents in those nations. Respondents in 1995 were asked about the legitimacy of five instrumental crime-related scenarios (such as avoiding fare on public transport). Suicide rates for 1995 were available from the World Health Organization (www.who.int) for 28 of these nations. For these 28 nations, the anomie index was not associated with the suicide rates (Pearson $r = 0.13$, $p = 0.52$). However, restricting the sample to the 14 European nations,[21] the association was positive ($r = 0.54$, $p = 0.05$). Thus, since the association was in the expected directions for this sample of European nations, the association between regional levels of anomie and suicide rates merits further study.

References

[20] Address enquiries to David Lester a tlesterd@stockton.edu.

[21] The European nations were: Belarus, Bosnia Herzegovina, Bulgaria, Croatia, Estonia, Finland, Latvia, Lithuania, Norway, Russia, Slovenia, Spain, Sweden, and Switzerland. (Data were not available for Macedonia and Moldova.) The non-European nations were: Armenia, Azerbaijan, India, Philippines, Mexico, Puerto Rico, USA, Australia, Brazil, Chile, Dominican Republic, Peru, Uruguay and Venezuela.

Goldney, R. D., Winefield, A. H., Tiggeman, M., Winefield, H., & Smith, S. (1989). Suicidal ideation in a young adult sample. *Acta Psychiatrica Scandinavica, 79,* 481-489.

Lester, D. (1970). Anomie and the suicidal individual. *Psychological Reports, 26,* 532.

Lester, D., & Yang, B. (1998). *Suicide and homicide in the 20th Century.* Commack, NY: Nova Science.

Schaller, S., & Schmidtke, A. (1995). Anomia, hopelessness, and well-being in the elderly. In D. Lester (Ed.) *Suicide '95.* Washington, DC: American Association of Suicidology, pp. 100-101.

Srole, L. (1956). Social integration and certain corollaries. *American Sociological Review, 21,* 709-716.

Zhao, R., & Cao, L. (2010). Social change and anomie. *Social Forces, 88,* 1209-1230.

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BULLYING AND SUICIDE CROSS-NATIONALLY[22]

DAVID LESTER

Abstract. In 20 European nations, the incidence of bullying in school children was associated with the suicide for young men, but not for young women.

The experience of bullying is associated with an increased risk of suicidal ideation and attempted suicide in adolescents (Kim & Leventhal, 2008). The present study explored whether this association could be found at the national level.

Due and Holstein (2008) summarized surveys conducted in 66 countries to assess the extent of bullying in school children 13-15 years old, both for boys and for girls, primarily around the year 2002. For 20 European nations[23], the suicide rates in 2000 for young men and women aged 15-24 were obtained from the World Health Organization (www.who.int). The mean percentage reporting bullying was 31.6% (SD = 10.5) for boys and 28.4% (*SD* = 9.1) for girls. The mean suicide rate was 18.1 per 100,000 per year (*SD* = 8.4) for men and 4.1 (*SD* = 1.8) for women.

The Pearson correlation between bullying and suicide rates for men was 0.43 (one-tailed $p = 0.03$) and for women .11 (n.s.). Thus, the association between bullying and suicide was replicated at the national level for men in this sample of European nations.

References

DUE, P., & HOLSTEIN, B. E. (2008) Bullying victimization among 13 to 15 year old school children. *International Journal of Adolescent Medicine & Health*, 20, 229-221.

KIM, Y. S., & LEVENTHAL, B. (2008) Bullying and suicide. *International Journal of Adolescent Medicine & Health*, 20, 133-154.

[22] Address correspondence to David Lester at lesterd@stockton.edu.

[23] Austria, Croatia, the Czech Republic, Denmark, England & Wales, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, the Netherlands, Norway, Poland, Sweden, Switzerland, and the Ukraine.

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ALIENATION AND SUICIDE RATES IN THE UNITED STATES: 1966-2007[24]

DAVID LESTER

Abstract The correlation between an index of alienation of Americans and the suicide rate of the United States from 1966 to 2007 was .42.

Almost every year since 1966,[25] Lou Harris poll takers have asked Americans the same five questions about their agreement with the following statements: the rich get richer and the poor get poorer, what you think doesn't count very much anymore, the people running the country don't really care what happens to you, most people in power try to take advantage of people like you, and you're left out of things going on around you. From the responses, they calculate an *alienation* index.

The alienation index for the period 1966-2007 was obtained from the website[26] and suicide rates for the United States from the World Health Organization. [27] The Pearson correlation was 0.42 (df=34, two-tailed $p < .01$). Thus, years in which Americans were more alienated had higher suicide rates. Of course, other social variables also may be associated with the suicide rate in the United States, but this is the first report of the present association

[24] Address enquiries to David Lester, Ph.D., Psychology Program, The Richard Stockton College of New Jersey, Jimmie Leeds Road, Pomona, NJ 08240-0195 or e-mail (lesterd@stockton.edu).
[25] The alienation questions were not asked in 1967, 1970, 1975, 1979, 1980 and 1981.
[26] www.harrisinteractive.com
[27] www.who.int

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SEX BIAS IN THE REPORTING OF SUICIDE AND GENOCIDE

DAVID LESTER

Abstract*:* Reports of suicide during two genocides (in Armenia in 1915 and in India and Pakistan in 1947) are primarily of women dying by suicide, often in mass suicides, to avoid abduction and rape. It is suggested that this may be biased reporting of suicidal behavior during these genocides.

Previous studies have reported high rates of suicide during the Holocaust, both in the ghettos and in the concentration camps (Lester, 2005) This raises the question of whether suicide was common during other genocides. Lester (2010) reviewed reports of suicide during the partition of India and Pakistan in 1947 and found that the reports were of women dying by suicide, sometimes in mass suicides. What of the genocide of the Armenians in the Ottoman empire in 1915?

Armenians

Miller and Miller (1982) interviewed 35 survivors of the Armenian genocide, now living in California. Their informants reported that many of those deported from Turkey died of thirst, hunger, disease and murder. Children were stolen, young women abducted, and women raped and mutilated. Mothers abandoned their children or gave them away to Turks, Kurds or Arabs and "not a few mothers and families committed suicide together (Miller & Miller, 1982, p. 55).

There are reports of hundreds of young women dying by suicide by drowning (Miller & Miller, 1993, p. 96). One informant tried to drown herself in a river, but a relative pulled her out. There are reports of girls linking arms or holding hands and jumping off bridges or cliffs into the rivers. Miller and Miller hypothesized that the girls were physically and emotionally exhausted, had witnessed incredible violence, and had lost hope of survival.

Miller and Miller documented three types of suicide. Altruistic suicide was evident in mothers who starved to give their children the limited food or who died with their children rather than abandoning them. Despair-motivated suicide had given up hope and either drowning themselves or simply sat down on the road to die. In defiant suicide, the goal was to cheat the aggressors of the sadistic pleasure of murder. One survivor reported an incident where those escorting the Armenians were stripping the deportees of their clothes and throwing them off a cliff into the river, whereupon one woman picked up her four-year-old son and jumped with him into the river.

No reports of suicide among the men were located.

Discussion

The most noteworthy aspect of these, admittedly brief accounts, is that the suicides reported were of women. The women were, of course, subjected to horrendous violence, but their suicides are cast as heroic acts to deny the murderers satisfaction.

Lester (2010) noted that the way in which these accounts are written permits several speculations. First, there is guilt on the part of the men that they could not protect their wives, sisters, mothers and children. By raising the suicides of the women to heroic proportions, they lessen the chance of being blamed for the tragedy.

Second, there is the possibility that suicide is seen as weak and inappropriate behavior and, by reporting only the suicides of women, the men themselves avoid the stigma of suicide. Even in the present era, there is stigma attached to suicides (and, by association, with their significant others), and this stigma was stronger in previous centuries. To have reported the suicides of men during these genocides would make the men seem weak too.

In other situations, such as the Jewish ghettos and the concentration camps in the Second World War, suicide by men was common (Lester, 2005). It is likely that men did die by suicide too during the genocide in Armenia but, if so, they have received less attention and documentation.

References

Lester, D. (2005). *Suicide and the Holocaust*. Hauppauge, NY: Nova Science.
Lester, D. (2010). Suicide and the partition of India. *Suicidology Online, 1*, 2-4.
Miller, D. E., & Miller, L. T. (1982). Armenian survivors. *Oral History Review, 10*, 47-72.
Miller, D. E., & Miller, L. T. (1993). *Survivors: An oral history of the Armenian genocide*. Berkeley: University of California Press.

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HOW MANY PILLS INGESTED CONSTITUTES A SUICIDE ATTEMPT?[28]

DAVID LESTER

Abstract: A sample of 51 college students, informed that 30 pills of a medication would kill a person, were asked how many would have to be ingested to constitute a suicide attempt. The median was 14 , with a range of 1 to 40.

Suicidologists have given much thought recently to the definition of suicidal behavior. Lester and Fleck (2010) discussed this problem for defining *completed suicide*, showing that students differed greatly in the range of behaviors that they viewed as suicide, but made similar judgments as did experts. Among suicidologists, there has been debate about whether non-fatal suicidal behavior should really be called "suicidal." Although some attempted suicides intended to die, others intended to survive. The current trend is to call the behavior self-injury (Brooke & Horn, 2010) or deliberate self-harm (Boxer, 2010).

Forty-one women and 10 men enrolled in a psychology course at a state college, with a mean age of 23.1 years (*SD* = 6.2), were asked: A lethal dose of a barbiturate medication is 30 pills. An individual swallows a number of pills that is less than 30. How many must this person swallow for you to think of him/her as an "attempted suicide." At least how many?

The mean number was 14.90 (*SD* = 8.14), the mode 10 and the median 14, with a range of 1 to 40. The modal response of ten pills would be called a "gesture" by many clinicians, but only four respondents chose the lethal amount or more (>= 30) as the criterion for labeling the behavior a suicide attempt. It appears that it might be useful to develop continuous scales of medical harm and damage rather than trying to develop two or three discrete categories to describe intentionally inflicted non-lethal self-injury.

References

Boxer, P. (2010) Variations in risk and treatment factors among adolescents engaging in different types of deliberate self-harm in an inpatient sample. *Journal of Clinical Child & Adolescent Psychology*, 39, 470-480.

Brooke, S., & Horn, N. (2010) The meaning of self-injury and overdosing in women fulfilling the diagnostic criteria for 'borderline personality disorder.' *Psychology 7 Psychotherapy*, 83, 113-128.

Lester, D., & Fleck, J. (2010) What is suicide? Will suicidologists ever agree? *Psychological Reports*, 106, 189-192.

[28] Address correspondence to David Lester at lesterd@stockton.edu.

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ETHICAL ISSUES IN SUICIDE RESEARCH[29]

DAVID LESTER

Ethics is concerned with the principles of right and good conduct. Ethics is relevant both to researchers in the field of suicidology and to clinicians working with suicidal individuals. The present article examines the different areas in suicidology where ethical issues are relevant.

General Ethical Issues in Research

Use of Human Subjects

There are general ethical principles concerning the use of human subjects which, therefore, apply to research on suicidal subjects. These include rules governing signed, consent forms for participation in research, full disclosure of the possible harm to subjects, and confidentiality of the data collected.

Authorship

Awarding proper credit for authorship has been a perennial issue in scholarly publications. This is especially pertinent when researchers fail to give co-authorship to students or assistants who worked on the research. Often such co-workers are acknowledged only in footnotes, and on some occasions not mentioned at all in the published work.

Related to this is the practice of chairs of departments insisting that their name be placed on all the papers by members of their departments even when they did not participate in the research or writing. This happens more in medical schools and clinics then in academia but is considered by some commentators to be unethical.

Ethics in Journal Publishing

There are instances of journals rejecting articles whose conclusions go against the opinions of the editor and/or reviewers. For example, one researcher whose paper reported that executions deterred murder was rejected because the editor and reviewers were opposed to the death penalty. The paper itself was methodologically sound. In another instance, a reviewer rejected a comment on his work because he had changed his mind about what he had published previously. These types of behavior are unethical.

Reviewing for Publication

An issue here is whether it is ethical to send papers out for review with the authors' names on them (versus anonymously) and keeping reviewers' names anonymous (versus named).

[29] Written in 2008.

Journals are now split on these issues. More recent issues involve paying reviewers and posting the article and the reviewers' comments online.

Effects of Personal Opinions

Some issues arouse strong opinions and emotions. When scholars write on or review the research on such topics, they ought to declare their own bias so that readers who know the reviewer's bias. This bias affects the way a piece of research is presented and the way in which results of research are interpreted. For example, one of us (Lester, 1998), when writing on the death penalty, stated his biases clearly in the Preface to his book.

The Consequences of Research

The published results of research can occasionally have implications for the community that the researcher did not intend. For example, in 1974, one of us (Lester, 1974) published a study which indicated that suicide prevention centers did not prevent suicide. Years later, he found out from a suicide prevention center director that his center had lost funding because of that report. The funding source had read the report and concluded that they were wasting their money. The researcher had not intended for suicide prevention centers to suffer from his research. Research often has social and political implications with associated consequences.

Negative Results

Positive findings get reported, but in order to identify reliable results, we need replication, and we need failures to find differences to be published so that these can be included in meta-analyses. A recent paper indicated, for example, that studies of the impact of anti-depressants which are published are overwhelmingly supportive whereas non-supportive studies are often not published.

Researchers are reluctant to publish negative results, and journals are reluctant to publish them. Sometimes, researchers devalue such studies, even their own. Occasional researchers wonder if their failure to replicate is because they made an "error" in their study or that they will offend the original researchers.

Failure to Cite Appropriate Sources

Animosities between sub-disciplines (e.g., psychology versus psychiatry; psychiatry versus public health) lead researchers to omit citations to research in other disciplines. In the research on whether gun control has an impact on suicide and homicide, researchers from the one discipline (public health, criminology and suicidology) often do not cite the research from the other disciplines. This introduces bias into the field.

Statistical Analyses

It is not unethical, of course, to make statistical errors. It is unethical, however, to carry out multiple statistical tests on a data set and report only those results that support one's

hypothesis. Reports should always mention the statistical tests that failed to support the hypothesis

Plagiarism

Obviously, plagiarism is unethical.

Issues Pertinent to Suicidology *Per Se*

Funding

Is it unethical to obtain funding and then give the money to groups or individuals who do not merit the money? In the USA, Senator Harry Reid obtained funding for suicidology and then gave the money to a group in his home state who knew little or nothing about suicide, A similar situation occurred in Canada where an endowed chair in suicidology at the University of Toronto was given to a scholar who was not in the field.

Testing Treatments

The traditional way of testing a treatment (medication or psychotherapy) is to have one group receive the treatment and the other to receive a placebo or no treatment. For most of the treatments utilized for suicidal behavior, there are established, clinically effective treatments available. Goldney and Stoffell (2000) argued, in this case, that this methodology is unethical and that it is unethical to withhold treatment from patients. Goldney and Stoffell argued that a new treatment should be tested against an established, effective treatment. For example, a new anti-depressant should be compared with an older antidepressant rather than with a placebo.

Assisted Suicide

Several writers have argued that clinicians should be available to assist suicidal individuals kill themselves, by providing supportive counseling and by providing the lethal means for suicide (Humphry, 1991; Kevorkian, 1991; Lester, 2003). Others have argued that clinicians should always be on the side of life (Hendin, 1997) and that assisted suicide is unethical. This raises the ethical issue of whether clinicians should be biased in favor of life or biased in favor of suicide, or whether clinicians should help client make and carry out their own decisions. (Lester, 1995).

In the USA, is it ethical for the federal government to interfere in state decisions in favor of assisted suicide, as in the case of Oregon? The Attorney General of the USA has, in the past, wanted to prosecute physicians who participated in this process.

Suicide Intervention

Although some practitioners argue that suicide (and, indeed, all suicides) should be prevented (Pretzel, 1968), others argue that suicide prevention is not always appropriate (Szasz, 1986). If the right to commit suicide exists (and it is certainly not illegal in most jurisdictions),

what is the justification for suicide intervention? The suicidal person may be acting willingly and autonomously, and so it is not appropriate for others to intervene in a paternalistic manner.

Macks (1971) argued that the goal of suicide prevention centers should not be to prevent suicide, but rather to help clients find other alternatives. Suicide prevention is appropriate only if the client is ambivalent, and clients must have the right to informed consent over any actions taken with them as the target. Szasz (1971) noted that labeling clients as psychiatrically disturbed is sometimes used simply to justify forcible intervention into their lives (such as in involuntary commitment).

However, if a client voluntarily seeks advice and help, then not to respond would be unethical. Since almost all suicide prevention centers are passive, waiting for clients to contact them, then their responding is morally correct. More active suicide prevention, however, does run the risk of being oppressive. To force counseling on those who do not request it is demeaning and can be life-threatening, Ernest Hemingway committed suicide partly to avoid ever having to return to the Mayo Clinic for further ECT treatments. It is unethical for police officers to arrest (and sometimes handcuff) those who have suicidal ideation and remove them forcibly to psychiatric facilities.

Publicizing Suicides

There are now guidelines for media sources when they write about suicide. Goldney (2000) went further and asked whether reports of suicides that might lead to imitation and contagion should even be published in scholarly journals. Once published there, the information is easily picked up by the media and by the Internet and could trigger further suicides.

Goldney also noted that, when publicity about suicide appears to lead to further suicides, it also typically found that many of these subsequent suicides have psychiatric disorders and are not under psychiatric care or else they are receiving inadequate psychiatric care. Goldney asked why the media are blamed for publicizing the suicides rather than those in charge of the health services for not identifying and providing good treatment for these individuals.

Restricting Access to Lethal Methods for Suicide

There is good evidence that restricting access to lethal methods for suicide may, in some cases, reduce suicidal behavior in the community, A failure to restrict such access could, therefore, be considered to be unethical, For example, Goldney (2000) noted that the Westgate Bridge in Melbourne had been used by 62 individuals for their suicide jumps. He asked why no barriers had been erected to prevent such jumps.

Genetic and Physiological Factors in Suicide

There is some evidence for genetic and physiological components to psychiatric disorders, including those that are associated with an increased risk of suicide. In the future, there may well be evidence for a specific genetic or physiological contribution to suicidal behavior *per se*. This increases the importance of confidentiality and informed consent in

research on this topic, a general issue already mentioned above. In addition, the possibility of a genetic or physiological contribution to suicidal behavior raises the ethical issues involved in counseling: who to tell (suicidal subjects, their relatives, etc.), when (is the reliability and validity of the genetic test sufficient?) and how (with education, counseling, psychotherapy, etc.).

References

Goldney, R. D. (2000). Lessons from the Westgate Bridge. *Medical Journal of Australia,* 172, 52-53.

Goldney,R. D., & Stoffell, B. F. (2000) Ethical issues in placebo-controlled trials in Alzheimer's disease. *Medical Journal of Australia,* 173, 147-148.

Hendin, H. (1997). *Seduced by death.* New York: Norton.

Humphry, D. (1991). *Final exit.* New York: Dell.

Kevorkian, J. (1991). *Prescription medicide.* Buffalo: Prometheus.

Lester, D. (1974). Effect of suicide prevention centers on suicide rates in the United States. *Health Services Reports,* 1974, 89, 37-39.

Lester, D. (1995). Counseling the suicidal person in the modern age. *Crisis intervention & Time-Limited Treatment,* 2, 159-165.

Lester, D. (1998). *The death penalty.* Springfield, IL: Charles Thomas.

Lester, D. (2003). *Fixin' to die.* Amityville, NY: Baywod.

Macks, V. (1971). Suicide prevention. *Social Work,* 16, 102-104.

Pretzel, P. W. (1968). Philosophical and ethical considerations of suicide prevention. *Bulletin of Suicidology,* July, 30-38.

Szasz, T. (1986). The case against suicide prevention. *American Psychologist,* 41, 806-812.

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STUDENT DEBT AND SUICIDE: IS IT A REALITY?

David Lester & Deborah M. Figart

Abstract: Case studies illustrate that student loan debt and student loan delinquency may play a role in some suicides. In addition, one sociological study provides limited information of the association between student loan delinquency and the suicide rates of those aged 25-44 and of males. However, no psychological autopsy study has yet been conducted to assess the extent of the role of student debt in suicide

Brown, Taylor and Price (2005) looked at the role of personal debt in the U.K. on psychological distress using the General Health Questionnaire (GHQ) and found that outstanding debt was associated with worse psychological well-being. Interestingly, mortgage debt was *not* associated with psychological well-being. Reading and Reynolds (2001) found that, in mothers with young children, their level of depression was predicted by their worry about debt. The amount of debt at baseline predicted depression scores six months later, but not when the level of depression was taken into account, and so cause-and-effect was not reliably demonstrated in this study. In a survey of 7,461 adults in England, Meltzer, et al. ((2011) found that having debts was associated with lifetime suicidal ideation even after controls for hopelessness, a major predictor of suicidal behavior.

The aim of the present paper was to examine whether there were any data on the role of student loan debt in suicides.

Debt and Suicide

Hintikka, et al. (1998) surveyed 4,868 adults in Finland and found that difficulty in re-paying debts (housing, student and other loans) in the prior year was more common in those aged 25-44, separated/divorced, unemployed, and with the largest housing loans. More of the 115 adults with suicidal ideation had difficulty paying debts in the prior year (53%) than those with no difficulty (19%). Similarly, more of the 49 adults who had attempted suicide had difficulty in paying debts (31%) than those with who had not attempted suicide (19%). Clearly, difficulty in paying debts was one of the stressors that increased the likelihood of suicidal behavior in this sample.

In recent years, it has become common in Japan to co-sign for a loan made by someone else, a friend or a relative. The co-signer becomes jointly liable for the full debt amount. When the borrower fails to repay the debt, the borrower suffers stigma, often resulting in suicide. Chen, Choi and Sawada (2010) noted that number of suicides in Japan in 1998 rose by 35% from the previous year, and the number of suicides by self-employed people rose by 43%, and they speculated that this jump in suicides was caused by the credit crunch in 1997. In a survey of the families of 305 suicides, 24 of the 52 suicides (46%) by self-employed people were precipitated

by multiple debt or co-guarantor problems as opposed to suicides by non-self-employed people (only 15%).

Particularly in India, the debts incurred by farmers as a result of declining prices of several crops and the costs they incur when they borrow to pay for seeds and fertilizer have resulted in a spate of suicides, particularly in those regions with low rainfall and little irrigation facilities such as Karnataka, Andhra Pradesh and Maharashtra (Vaidyanathan, 2006). Imprudent large borrowing from high cost sources is sometimes used for non-productive items, but also for digging and deepening wells and cultivating high value crops (such as cotton and spices) in the expectation of high yields and good prices which often fail to materialize.

Pridmore and Reddy (2012) searched newspaper records from around the world and found 15 suicides who had died in the setting of acute financial loss. They identified three groups: (i) some had lost their life savings (n=5), (ii) some were being investigated for fraud (n=7), and (iii) some were in financial difficulties and killed family members prior to killing themselves (n=3). Pridmore and Reddy felt that the majority of these suicides were free from major psychiatric disorders.

In a psychological autopsy in Japan of suicides who had unmanageable debt compared with a comparison group of suicides without such debt, Kameyama, et al. (2011) found that those with debt were more likely to have been self-employed and divorced and less likely to have sought help prior to their death by suicide. The two groups did not differ in the presence of psychiatric disorder.

Yip, et al. (2007) looked at 1,088 suicides in Hong Kong, of whom 24.5% had problems with debt. Of these, 33% had debts from gambling and 11% from business failures. Only 18% of those with debts were judged to have manageable debts. Having debts in this sample of suicides was predicted by being male, being 20-59 years of age, born in Hong Kong rather than the mainland, not having a medical illness and not having a psychiatric disorder. The suicides with debts problems were less likely to leave a suicide note. They were more often employed and less often receiving public assistance.

Gambling Debt and Suicide

Reports are common of high rates of fatal and nonfatal suicidal behavior associated with gambling (e.g., Frank, Lester & Wexler, 1991; Zangench & Hason, 2006), especially pathological gambling (e.g., Anderson, Sisak & Varnik, 2011; Battersby, et al., 2006) and gambling debt (e.g., deRoux & Leffers, 2009).

In a study of 150 suicides in Hong Kong, Wong, Chan, Conwell, Conner and Yip (2010) found that 17 met the criteria for being pathological gamblers (versus only one of the age and sex matched living controls). All 17 of these suicides had unmanageable debt at the time of their suicide, but 14 also had associated psychiatric disorders, primarily major depressive disorders (n=10) and substance-use disorders (n=3). None had received any psychiatric treatment.

Student Debt and Suicide

It is important to note, first of all, that being a college student is not associated with an increased (or decreased) suicide rate. Stack (2011) used a government mortality data set that included occupation and found that only 14.4% of the deaths of students aged 18-24 were from suicide as compared to 16.7% of the deaths of non-students of the same age. Of course, if suicide occurs as a result of student debt, then the suicides may occur *after* graduation.

The research reviewed above indicates that debt is associated with worse psychological well-being in people and with suicidal behavior (lethal and non-lethal). Is this happening with student debt? Certainly, anecdotal evidence supports this, as well as opinion. For example, Williams (2006) thought that the documented high rate of suicide among veterinarians in Britain was attributable to their high student debt after graduating.

Roswell Friend, aged 22, died by suicide in August 2011 just after graduating from Temple University (Philadelphia, USA) with student loans and while upset over the back-rent he owed his roommates for the townhouse that they rented.[30] Jan Yoder had been a graduate student in organic chemistry and incurred $100,000 in student loan debt. After struggling to find a job, he killed himself using asphyxiation with nitrogen in the university laboratories in Normal, Illinois (Johannsen, 2012). Johannsen posted several articles about the problem of suicide and student debt and received many replies from readers admitting to thinking about suicide and planning how to die by suicide as a result of their student loan debt. One respondent wrote, "I think about jumping from the 27th floor window of my office every day."

Hattenstone (2013) reported two suicides in English students with student debt problems. Toby Thorn, aged 23, was £3,000 overdrawn at his bank and owed a further £5,000. He had dropped out of his college at Cambridge University, and there were signs of depression in earlier years. Toby wrote his suicide note on the back of an envelope from his bank. Chris Habgood, 26 years old, was studying forensic computing, but he stole his step-mother's credit card and lost £20,000 gambling online. His father recognized that Chris had many problems but felt that his son's financial problems played a role in his decision to die by suicide.

Lange and Byrd (1998) found that chronic financial strain in university students was associated with worse psychological well-being, most likely mediated by the negative impact of their belief in their internal locus of control and on the financial strain on their self-esteem. Ross, et al. (2006) found that debt was associated with worse psychological well-being as measured by the GHQ in Canadian medical students. Informal reports support this conclusion (e.g., Anon, 2018).

Lockert (2019) surveyed 829 people from a Student Loan Planner email list, of whom 90% were between the ages of 20 and 39, 66% were women, and 70 had between $100k to $500k in student loan debt. She found that just over half had experienced depression over their debt, roughly 90% had experienced anxiety, and 1 in 15 had considered suicide. Suicidal ideation was higher in those in the middle range of debt: $80k to $150k. Dentists were at highest risk of

[30] http://timonium.patch.com/articles/nj-police-roswell-friends-death-a-possible-suicide. Interestingly, although his death wiped clean the student loan debt he owed Sallie Mae, his mother was liable for federal income tax for the loan after it was discharged since she co-signed the loan with him.

suicide, followed by veterinarians and lawyers. Contributing factors were having a low salary, a competitive job market, and worries about how student loans would affect buying a house, marriage and having children.

Jones (2019) looked at panel data for the 50 states for the period 20005-2012. He found that student loan delinquency (but not student loan debt) had an impact on the suicide rates within states, but not between states, for the total suicide rate, the male suicide rate and the suicide rates for those aged 25-34 and 35-44, even after controls for other sociological variables (such as divorce, unemployment and poverty).

Discussion

It is surprising that there has not been much research on the role of student debt in suicide. One problem is that any suicides for which student debt played a role will be of working age, and the information noted about their lives may include career details, but not debt details. Apart from case studies, some of which were noted above, only a psychological autopsy study that included questions about debts and, in particular, student loan debt, would provide convincing data.

References

Anderson, A., Sisak, M., & Varnik, A. (2011). Familicide and suicide in a case of gambling dependence. *Journal of Forensic Psychiatry & Psychology, 22,* 56-168.

Anon. (2018, January 8). Feelings of despair or suicidal thoughts over student debt? 'It's not uncommon' say those who work with struggling borrowers. University Wire, Carlsbad.

Battersby, M., Tolchard, B., Scurrah, M., & Thomas, L. (2006). Suicide ideation and behavior in people with pathological gambling attending a treatment service. *International Journal of Mental Health & Addiction, 4,* 233-246.

Brown, S., Taylor, K., & Price, S. W. (2005). Debt and distress. *Journal of Economic Psychology, 26,* 642-663.

Chen, J., Choi, Y. J., & Sawada, Y. (2010). Joint liability borrowing and suicide. *Economics Letters, 109,* 69-71.

deRoux, S., & Leffers, B. (2009). Asphyxiation by occlusion of nose and mouth by duct tape. *Journal of Forensic Sciences, 54,* 1453-1455.

Frank, M. L., Lester, D., & Wexler, A. (1991). Suicidal behavior among members of Gamblers Anonymous. *Journal of Gambling Studies, 7,* 249-254.

Hattenstone, S. (March 22, 2013). Students and depression. *The Guardian*, www.guardian.co.uk/education/2013/mar/23/student-suicide-depression-debt-recession

Hintikka, J., Kontula, O., Saarinen, P., Tanskanen, A., Koskela, K., & Viinamaki, H. (1998). Debt and suicidal behavior in the Finnish general population. *Acta Psychiatrica Scandinavica, 98,* 493-496.

Johannsen, C. C. (July 2, 2012). The one's we've lost. *Huff Post College*, www.huffingtonpost.com/c-cryn-johannsen/student-loan-debt-suicides_b_1638972.html

Jones, R. W. (2019). The impact of student loan debt and student loan delinquency on total, sex-, and age-specific suicide rates during the Great Recession. *Sociological Inquiry, 89,* 677-702.

Kameyama, A., Matsumoto, T., Katsumata, Y., Akazawa, M., Kitani, M., Hirokawa, S., & Takeshima, T. (2011). Psychosocial and psychiatric aspects of suicide completers with unmanageable debt. *Psychiatry & Clinical Neurosciences, 65,* 592-595.

Lange, C., & Byrd, M. (1998). The relationship between perceptions of financial distress and feelings of psychological well-being in New Zealand university students. *International Journal of Adolescence & Youth, 7,* 193-209.

Lockert, M. (2019). Mental health survey: 1 in 15 high student debt borrowers considered suicide. https://www.studentloanplanner.com/mental-health-awareness-survey/

Meltzer, H., Bebbington, P., Brugha, T., Jenkins, R., McManus, S., & Dennis, M. S. (2011). Personal debt and suicidal ideation. *Psychological Medicine, 41,* 771-778.

Pridmore, S., & Reddy, A. (2012). Financial loss and suicide. *Malaysian Journal of Medical Sciences, 19(2),* 74-76.

Reading, R., & Reynolds, S. (2001). Debt, social disadvantage and maternal depression. *Social Science & Medicine, 53,* 441-453.

Ross, S., Cleland, J., & MacLeod, M. J. (2006). Stress, debt and undergraduate medical student performance. *Medical Education, 40,* 584-589.

Stack, S. (2011). College student suicide risk. In D. A. Lamis & D. Lester (Eds.), *Understanding and preventing college student suicide,* pp. 33-46. Springfield, IL: Charles C. Thomas.

Vaidyanathan, A. (2006). Farmers' suicides and the agrarian crisis, *Economic & Political Weekly, 41(38),* 4009-4013.

Williams, D. (2006). Pressures of student debt. *Veterinary Record, 158,* 383.

Wong, P. W. C., Chan, W. S. C., Conwell, Y., Conner, K. R., & Yip, P. S. F. (2010). A psychological autopsy study of pathological gamblers who died by suicide. *Journal of Affective Disorders, 120,* 213-216.

Yip, P. S. F., Watson, R., Yang, K. C. T., Ip, B. Y. T., & Law, Y. W. (2007). Financial debt and suicide in Hong Kong SAR. *Journal of Applied & Social Psychology, 37,* 2788-2799.

Zangench, M., & Hason, T. (2006). Suicide and gambling. *International Journal of Mental Health & Addiction, 4,* 191-193.

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THE RELATIONSHIP BETWEEN UNEMPLOYMENT AND SUICIDE

David Lester & Bijou Yang

Presented to the Employment Committee, House of Commons, UK, 1994

Abstract Studies of individuals indicate an association between unemployment (and long-term unemployment) and both fatal and nonfatal suicidal behavior, but it is not yet possible to draw cause-and-effect conclusions from the research. Time-series studies of nations indicate an association between unemployment and fatal suicidal behavior for some nations, for some time periods and for some social groups within nations. In Great Britain, an association between long-term unemployment and nonfatal suicidal behavior has been documented in women. However, at the societal (aggregate) level, the association between fatal suicide and unemployment may not be statistically significant.

Introduction

In evaluating the effects of a social stressor on human behavior, many of the possible psychological and social consequences are difficult to measure accurately. For example, alcoholism and drug abuse are possible indicators of individual and social pathology. However, the definitions of these behaviors differ from researcher to researcher, and estimating their community-wide prevalence is costly and time-consuming. Similar problems exist for the use of psychiatric illness as an index of individual and social pathology. Furthermore, these types of behaviors require the individual to admit having the problem.

In contrast, suicide is an ideal measure of the impact of stressors on a society since death is not subjective and, at least in developed the certification of death is reasonably accurate.[31]

The present memorandum will discuss the evidence for an association between unemployment (including long-term unemployment) and suicidal behavior at the individual level and at the societal level. For the societal level of analysis, both regional and time-series studies will be reviewed. Conclusions are drawn in the final section of the Memorandum.

Unemployment and Suicide

The Individual Level

[31] Of course, coroners and medical examiners may sometimes certify the causes of some deaths erroneously, especially suicide. For example, there is evidence that coroners in Ireland occasionally certify suicidal deaths as nonsuicidal in nature, thereby rendering the "official" suicide rate as less than the "true" suicidal rate.

Suicidal behavior can be fatal (commonly called completed suicide) or nonfatal (commonly called attempted suicide, parasuicide or self-injury/poisoning).

At the individual level, the association between unemployment and suicidal behavior is quite strong (Lester, 1992; Lester & Yang, 1994; Platt, 1984, 1986). On the one hand, the rates of both fatal and nonfatal suicide are higher in the unemployed than in the employed; on the other hand, the rate of unemployment is higher in fatal and nonfatal suicides than in nonsuicidal people.

Long-term unemployment is found to have a greater impact on suicidal behavior than short-term unemployment. For example, one study (of British women) found that long-term unemployment was associated with a higher rate of nonfatal suicidal behavior (Hawton, et al., 1988), while another study (in Italy) found that it was associated with a higher rate of fatal suicide (Costa, et al., 1989).

However, cause-and-effect conclusions about unemployment and suicidal behavior are not possible on the basis of these studies, for at least two explanations are possible for the association. It may be that unemployment increases the risk of suicidal behavior in those who are unemployed; alternatively, particular personality traits may increase the risk of both suicidal behavior and unemployment. For example, those who have a psychiatric disorder (such as a depressive disorder or a substance abuse disorder) may be more likely to engage in fatal and nonfatal suicidal behavior (Lester, 1992) and to be fired from their job or rejected by prospective employers.

In line with the latter alternative, it has been documented that, among those engaging in nonfatal suicidal behavior, those who were unemployed were more often drug and alcohol abusers and to have records of previous criminal behavior and psychiatric treatment (Platt and Duffy, 1986; Hawton, et al., 1988). This conclusion, if valid, may be especially relevant to those who have been unemployed for long periods of time.

To date, no research study has attempted to test the validity of these two alternative explanations for the association between unemployment and suicidal behavior.

The Societal Level

At the societal level, two types of studies are possible: regional (which examine the association between unemployment and suicidal behavior over a number of regions, such as counties or nations) and time-series (which examine the association between unemployment and suicidal behavior over time within a nation). These studies typically focus on fatal suicidal behavior since accurate measures of nonfatal suicidal behavior are not usually available for regions or nations.

(A) Time-Series Studies

Time-series studies have generally shown that unemployment and fatal suicidal behavior are associated. Years which have higher rates of unemployment have, in general, higher rates of fatal suicide (Lester & Yang, 1994; Platt, 1984).

With regard to *long-term unemployment*, Stack and Haas (1984) found that the duration of unemployment was associated with the fatal suicide rate in America for the period 1948 to 1978 along with the divorce rate. Years when unemployment was of longer duration had a higher fatal suicide rate, even when other possible social causes of suicide (such as divorce) were taken into account.

However, this general conclusion needs to be qualified by several caveats. First, not all nations show this association. For example, in a study of twelve nations (including England and Wales) with data available for the period of 1950 to 1985, only Japan, the Netherlands, Taiwan and the USA showed an association (Yang & Lester, 1994).[32]

Second, not all social groups in any nation may show the association. For example, in the USA from 1940 to 1984, Yang (1992) found that unemployment was associated with the rate of fatal suicidal behavior only for white male (and not for white females, nonwhite males or nonwhite females). For the same time period, Yang (1990) found that unemployment was associated with the rate of fatal suicidal behavior only for those aged 15 to 54, and not for those over the age of 55. This latter result makes sense since the association was found for those age groups most concerned with the labor market.

The empirical association between unemployment and the rate of fatal suicidal behavior may also depend upon such factors as the time period chosen (time periods including the Great Depression of the 1930s typically show a stronger association than post-Second World War periods) and on which other social factors are entered into the multiple regression analysis. For example, social indicators such as the divorce rate are very strongly associated with rates of fatal suicide and, if divorce is entered into the regression analysis, the association between unemployment and rates of fatal suicide may no longer be statistically significant (Yang and Lester, 1994).

(B) Regional Studies

Regional studies also indicate in general that regions with a higher unemployment rate also have a higher rate of fatal suicide (Lester & Yang, 1994; Platt, 1984) but, again, there are exceptions. This does not appear to be true, for example, over the states of America (Lester, 1994) or over nations of the world (Lester, in press).[33]

[32] The association was not found for Austria, Belgium, Canada, Denmark, England and Wales, Norway, Sweden or West Germany.

[33] The difference in the conclusions from regional and time-series studies has puzzled social scientists, and no satisfactory explanation has yet been proposed.

However, for the purposes of drawing conclusions about the impact of economic changes for a society, time-series studies are more relevant than regional studies if decision makers are concerned with predicting the effect of social policies in their particular nation.[34][35]

Conclusions

Research appears to indicate that suicidal behavior (both fatal and nonfatal) is more common in the unemployed than in the employed, and this may be especially true for long-term unemployment. For example, a study of British women documented higher rates of nonfatal suicidal behavior in the long-term unemployed. However, the research does not permit us to draw cause-and-effect conclusions at the present time. It may be that unemployment increase the risk of suicidal behavior or that personal characteristics (such as psychiatric disturbance) increase the likelihood of both suicidal behavior and unemployment.

Time-series research at the societal level indicates that unemployment and fatal suicidal behavior are associated, but this association is not always found for every nation, for every social group within a nation, or for every time period. For a time-series study of England and Wales, the association was not found over the period of 1950 to 1985.

References

Costa, G., Crepet,. P., & Florenzano, F. Unemployment and mortality in Italy. In S. D. Platt & N. Kreitman (Eds.) *Current research on suicide and parasuicide*. Edinburgh: University of Edinburgh Press, 1989, 40-46.

Durkheim, E. *Le suicide*. Paris: Felix Alcan, 1897.

Hawton, K., Fagg, J., & Simkin, S. Female unemployment and attempted suicide. *British Journal of Psychiatry*, 1988, 152, 632-637.

Henry, A. F., & Short, J. F. *Suicide and homicide*. New York: Free Press, 1954.

Lester, D. *Why people kill themselves.* Springfield, IL: Charles Thomas, 1992.

Lester, D. *Patterns of suicide and homicide in America*. Commack, NY: Nova Science, 1994.

Lester, D. *Patterns of suicide and homicide in the world*. Commack, NY: Nova Science, in press.

Lester, D., & Yang, B. *Economic perspectives on suicide*. New York: AMS, 1994.

Platt, S. D. Unemployment and suicidal behavior. *Social Science & Medicine*, 1984, 19, 93-115.

Platt, S. D. Parasuicide and unemployment. *British Journal of Psychiatry*, 1986, 149, 401-405.

Platt, S. D., & Duffy, J. C. Social and clinical correlates of unemployment in two cohorts of male parasuicides. *Social Psychiatry*, 1986, 21, 17-24.

Stack, S., & Haas, A. The effect of unemployment duration on national suicide rates, 1948-1982. *Sociological Focus*, 1984, 17, 17-29.

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[34] One issue that the present memorandum does not address is the explanation for the association between unemployment and suicidal behavior. At the individual level, the answer must be psychological while, at the social level, the theories proposed by Durkheim (1897) and Henry and Short (1954) are useful

[35] We recognize that the problem addressed in this Memorandum may be more complex. At the individual level, the psychological state of the person is important. For example, the threat of being laid off from work may be a potent stressor. The level of unemployment may also be critical, as may the extent of unemployment compensation and the tightness of the labor market. For example, if the unemployment rate is low, then finding a new job may be easier than otherwise. However, there is no good research to date on how these factors affect the association between unemployment and suicidal behavior.

Yang, B. The impact of the economy on suicide in different social and demographic groups. Paper presented at Eastern Economic Association, Cincinnati, OH, 1990.

Yang, B. The economy and suicide. *American Journal of Economics & Sociology*, 1992, 51, 87-99.

Yang, B., & Lester, D. The social impact of unemployment. *Applied Economics Letters*, 1994, 1, 223-226.

Suicide Studies, 2020, 1(1)

SUICIDE IN CANADA: A COMPARISON WITH OTHER NATIONS OF THE WORLD: 1970-1990

David Lester

Abstract: Recent epidemiological trends in Canadian suicide rates were compared with world-wide trends. Current theories of the etiology of suicide were reviewed, including physiological, psychological and sociological perspectives, and the most powerful predictors of suicidal behavior identified. These theories were then used to derive a linear regression equation to predict the Canadian suicide rate. In addition, the time-series Canadian suicide rate was seen to be predictable using measures of family social integration, as predicted by Durkheim's classic sociological theory of suicide.

The task addressed in this article is a review of the epidemiology of suicide in Canada, both in comparison with suicide in other countries and as it changes over time. In doing this, I will compare the suicide rate in Canada with the suicide rates of other nations of the world and, in particular, with the suicide rate of its neighbor, the United States.

The Epidemiology of Suicide in Canada and the World

Canada has shown epidemiological trends in suicide rates in recent years similar to those in other nations. From 1970 to 1984, Canada experienced a rising suicide rate in men, as did 21 of 23 nations studied by Lester (1990), but a slightly decreasing suicide rate for women as did only nine of the 23 nations. The United States showed changes similar to those in Canada. Nations with higher suicide rates in 1970 experienced a larger absolute increase from 1970 to 1980, and both Canada and the United States were consistent in this trend (Lester, 1988a).

The 1970s witnessed rising suicide rates among youth. From1970 to1980, Lester(1988b) found that 23 of 29 nations studied experienced a rise in youth suicide rates. In Canada the suicide rate of those aged 15-24 rose 50.0% while in the United States the increase was39.8%.

There has been concern recently over rising elderly suicide rates. From 1970 to 1980, Lester (1993) found rising elderly suicide rates for men in 17 of 28 nations studied and in 15 of the nations for women. In Canada, the suicide rate for those 65 years of age and older rose 54.9% in men and 28.3% in women. For the United States the respective figures were +4.1% and -19.4%. Thus, while the data from Canada were consistent with the general trend in the world, the data from the United States were not. However, in the 1980s, while the elderly suicide rate in the United States continued to rise, the elderly suicide rate in Canada declined (see Table 1)

Canadian and United States Suicide Rates

Leenaars and Lester have conducted a number of studies comparing suicidal behavior in Canada with suicidal behavior in the United States. Leenaars and Lester (1990a, 1990b, 1992a) have reported on the epidemiology of suicide in Canada over the time and compared the changes with those in the United States. Prior to 1971, the suicide rates for men and women in Canada were lower than those in the United States, but since 1971 the difference has been reversed.

Although the suicide rates of adolescents have risen in both nations in the last thirty years, the rise had been relatively greater in Canada. In Canada by the late 1980s, the suicide rates of young males and elderly males were approximately equal, whereas in the United States the suicide rate of elderly males still exceeded the suicide rate for young males.

Leenaars and Lester have conducted several studies in order to see whether the time-series suicide rate in Canada is associated with social and economic factors. Using multiple regression analyses, Leenaars, et al. (1993) found that higher suicide rates in Canada from 1950 to 1985 were associated with higher divorce rates and lower birth rates, but not significantly with the marriage rate. In the. United States, the effects of divorce and birth rates suicide rates were similar to their effects in Canada, but marriage rates were also negatively associated with suicide rates. More recent studies (Leenaars and Lester, 1994a, 1994b) have indicated that social factors (such as marriage, divorce and birth rates) are more powerful predictors of the suicide rates of Canadian youth and elderly than of the suicide rate of Canadian middle-aged people, and that the unemployment rate also contributed to the prediction of the time-series Canadian suicide rate.

Leenaars and Lester (1994c) found that homicide and suicide rates were positively associated over time from 1969-1988 in the United States but not in Canada. An examination of Holinger's (1987) hypothesis that the size of the youth cohort was positively related to youth suicide rates was not confirmed either for Canada or the United States for the period 1969-1988.

Of course, other factors may influence the time-series suicide rate. Lester and Leenaars (1993) have shown that the passage of stricter firearms control legislation in Canada had a beneficial impact on the Canadian suicide rate, lending support to the hypothesis that restricting access to lethal methods for suicide may prevent suicide (Clarke and Lester, 1989). Consistent with this finding, Lester (1994b) has found that the prevalence of guns in the Canadian provinces is positively associated with their use for suicide, as is the case in the United States.

Explanations of Differing National Suicide Rates

Physiological Theories

One possible explanation, of course, for differences in the suicide rates of nations could be that different nationalities differ in some relevant manner in their physiology. Perhaps, for example, there are differences in inherited psychiatric disorders, particularly affective disorders, or brain concentrations of serotonin, the neurotransmitter believed to be responsible for depression?

Lester (1987) studied the associations between the proportions of people in 17 industrialized nations with the different types of blood (0, A, B and AB) and the nations' suicide

rates. He found that, the lower the proportion of Type 0 people and the higher the proportion of Type AB people, the higher the suicide rate.

Mawson and Jacobs (1978) noted that the synthesis of the neurotransmitter serotonin (believed to contribute to people's level of depression) by the body requires the precursor amino acid L-tryptophan. Corn has less L-tryptophan as compared to other cereals, and so nations with a higher corn consumption would get less L-tryptophan, and so might have lower levels of serotonin. Lester (1985), however, in a study of 38 nations, including Canada, found no association between per capita consumption of corn and suicide rates. Kitahara (1986a, 1986b) estimated the levels of tryptophan in the blood relative to other amino acids (such as tyrosine) from dietary intake in residents of nations. He found no associations in a large sample of nations, including Canada (a result replicated by Lester [1989]).

Psychological Theories

The major psychological factors found to be associated with and predictive of suicidal behavior are depression, and in particular hopelessness, and psychological disturbance, labeled variously as neuroticism, anxiety, or emotional instability (Lester, 1992a). Psychiatric disorder of any kind appears to increase the risk of suicide, with affective disorders and substance abuse leading the list.

Alcohol abuse and drug abuse are strongly linked with suicidal behavior. Not only are these behaviors seen as self-destructive in themselves (Menninger [1938] called them chronic suicide), but both attempted and completed suicide occur at high rates in substance abusers (Lester, 1992b).

Composition Theories

Moksony (1990) has noted that one simple explanation of differences in suicide rates between nations is that the national populations differ in the proportion of those at risk for suicide. For example, typically in developed nations, suicide rates are highest in the elderly. Therefore, nations with a higher proportion of the elderly will have a higher suicide rate.

Social Theories

The most popular explanations of social suicide rates focus on social variables. These social variables may be viewed in two ways: (1) as direct causal agents of the suicidal behavior, or (2) as indices of broader, more abstract, social characteristics which differ between nations.

The most important theory for choosing relevant variables is that of Durkheim (1897). Durkheim hypothesized that suicide rates were caused by the society's level of social integration (that is, the degree to which the people are bound together in social networks) and the level of social regulation (that is, the degree to which people's desires and emotions are regulated by societal norms and customs). Durkheim thought that this association was curvilinear, but later sociologists have suggested that the association is linear in modern societies (Johnson, 1965), with suicide increasing as social integration and regulation decrease. Studies of samples of

nations have found that suicide rates are associated with such variables as the birth rate, female participation in the labor force, immigration, and the divorce rate (Stack, 1980, 1981a, 1981b).

Some investigators see these associations as suggesting a direct link between divorce or immigration and suicidal behavior. For example, divorce may be associated with suicide at the aggregate level because divorced people have a higher suicide rate than those with other marital statuses. other investigators see the associations as suggesting that divorce and immigration are measures of a broader and more basic social characteristic, perhaps social integration, which plays a causal role in suicide. In this latter case, nations with a higher rate of divorce may have a higher rate of suicide for those in all marital statuses.

In a study of 25 nations in 1970, Lester (1994a) found that suicide rates were associated positively with the percentage of the elderly, the divorce rate and the gross domestic product, and negatively with the percentage of people under the age of 15, the unemployment rate and the birth rate. The association of suicide with birth and divorce rates is consistent with predictions from Durkheim's theory, the association with the percentage of elderly and young is consistent with a composition explanation of the suicide rate, and the association with unemployment and gross domestic product is consistent with previous research findings (Platt 1984; Stack, 1981b).

Predicting Canada's Suicide Rate

This brief review of physiological, psychological, sociological and compositional theories of suicide rates has identified a number of variables which ought theoretically to be associated with suicide rates or which have been found empirically to correlate with suicide rates. As a test of the utility of these variables, a set of these variables were tested for their ability to predict the suicide rates of a sample of developed nations with available data. Then, the regression equation so identified was examined for its ability to predict the Canadian suicide rate.

The variables chosen, together with their theoretical source, were: blood type (physiological), alcohol consumption (psychological), percentage of the elderly (compositional), and divorce and birth rates (sociological). The sample used consisted of 18 industrialized nations first used by Lynn (1982) in a study of national character. Data on blood types were available for 17 of these, and the present analysis restricted the sample to these 17 nations.[36] The multiple linear regression equation was derived from 16 of the nations, excluding Canada, and then the Canadian suicide rate was predicted from this regression equation.

The results of the multiple regression analysis are shown in Table 2, together with the predicted suicide rate for Canada when the values for the Canadian predictor variables are substituted into the regression equation. It can be seen that the Canadian suicide rate was predicted quite accurately, 143 per million per year in 1980 as compared to the actual suicide rate of 141 per million per year.

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[36] Australia, Austria, Belgium, Canada, Denmark, Finland, France, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Sweden, the United Kingdom, the United States and West Germany. Data on blood type were not available for Switzerland

Discussion

Recent epidemiological trends in the Canadian suicide rate, such as rising youth suicide rates, were seen to be generally similar to trends in other nations of the world. However, research conducted by Leenaars and Lester has identified differences between, as well as similarities in, suicidal behavior in Canada and the United States. These differences may be a result of the very different histories of the two nations (Leenaars and Lester, 1992a) and differences in their national character (Lynn, 1982), as well as more specific factors such as differences in the attitudes toward suicide held by the citizens of the two nations (Leenaars and Lester, 1992b). Much more research is needed to test these different explanations for the Canadian/United States differences in suicidal behavior.

An examination of the time-series Canadian suicide rate indicated that it is predicted by measures of social integration, such as the divorce and birth rates, as predicted by Durkheim's classic sociological theory of suicide.

Finally, a review of the major perspectives on and predictors of suicide, both at the individual level and at the societal level, identified several possible correlates of national suicide rates. As an exercise, the Canadian suicide rate was predicted quite precisely based on a multiple regression equation derived from data from 16 industrialized nations.

References

Clarke, R. V., & Lester, D. (1989). *Suicide: Closing the exits*. New York: Springer-Verlag.

Durkheim, E. (1897). *Le suicide*. Paris: Felix Alcan.

Holinger, P. C. (1987). *Violent deaths in the United States*. New York: Guilford.

Johnson, B. D.(1965) . Durkheim's one cause of suicide. *American Sociological Review, 30,* 875-886.

Kitahara, M. (1986a). Dietary tryptophan ratio and suicide. *International Journal of Biosocial Research, 8*(1), 53-60.

Kitahara, M. (1986b). Tryptophan uptake from diet and the incidence of suicide. *Biology & Society, 3*(2), 74-79.

Leenaars, A. A., & Lester, D. (1990a). Suicide in adolescents. *Psychological Reports, 67,* 867-873.

Leenaars, A. A., & Lester, D. (1990b). A comparison of rates and patterns of suicide in Canada and the United States. In D. Lester (Ed.) *Suicide '90* (pp. 21-22). Denver, CO: American Association of Suicidology.

Leenaars, A. A., & Lester, D. (1992a). Comparison of rates and patterns of suicide in Canada and the United States, 1960-1988. *Death Studies, 16,* 417-430.

Leenaars, A. A., & Lester, D. (1992b). Facts and myths of suicide in Canada and the United States. *Journal of Social Psychology, 132,* 787-789.

Leenaars, A. A., & Lester, D. (1994a). The changing suicide pattern in Canadian adolescents and youth compared to their American counterparts. Submitted.

Leenaars, A. A., & Lester, D. (1994b). Domestic and economic correlates of violence in Canada and the United States. *Italian Journal of Suicidology,* in press.

Leenaars, A. A., & Lester, D. (1994c). Suicide and homicide rates in Canada and the United States, *Suicide & Life-Threatening Behavior, 24,* 184-191.

Leenaars, A. A., Yang, B., & Lester, D. (1993). The effect of domestic and economic stress on suicide rates in Canada and the United States. *Journal of Clinical Psychology, 49,* 918-921.

Lester, D. (1985). Corn consumption, tryptophan and cross-national homicide and suicide rates. *Journal of Orthomolecular Psychiatry, 14,* 178-179.

Lester, D. (1987). National distribution of blood groups, personal violence (suicide and homicide), and national character. *Personality & Individual Differences, 8,* 575-576.

Lester, D. (1988a). A critical-mass theory of national suicide rates. *Suicide & Life-Threatening Behavior, 18,* 279-284.

Lester, D. (1988b). Youth suicide. *Adolescence, 23,* 955-958.

Lester, D. (1989). Tryptophan uptake and national rates of suicide and homicide. *Journal of Orthomolecular Medicine, 4,* 159-160.

Lester, D. (1990). Changes to suicide rates unique to Canada? *Canadian Journal of Public Health, 81,* 240-241.

Lester, D. (1992a). *Why people kill themselves.* Springfield, IL: Charles Thomas.

Lester, D. (1992b). Alcoholism and drug abuse. In R. W. Maris, A. L. Berman, J. T. Maltsberger & R. I. Yufit (Eds.) *Assessment and prediction of suicide* (pp. 321-336). New York: Guilford.

Lester, D. (1993). Attempts to explain changing elderly suicide rates. *International Journal of Geriatric Psychiatry, 8,* 435-437.

Lester, D. (1994a). *Patterns of suicide and homicide around the world.* Commack, NY: Nova Science.

Lester, D. (1994b) The use of firearms for suicide in Canada. *Psychological Reports,* in press.

Lester, D., & Leenaars, A. A. (1993). Suicide rates in Canada before and after tightening firearm control laws. *Psychological Reports, 72,* 787-790.

Lynn, R. (1982). National differences in anxiety and extraversion. *Progress in Experimental Personality Research, 11,* 213-258.

Mawson, A., & Jacobs, K. (1978) Corn consumption, tryptophan and cross-national homicide rates. *Journal of Orthomolecular Psychiatry, 7,* 227-230.

Menninger, K. (1938). *Man against himself.* New York: Harcourt, Brace & World.

Moksony, F.(1990). Ecological analysis of suicide. In D. Lester (Ed.) *Current concepts of suicide* (pp. 121-138). Philadelphia, PA: Charles Press.

Platt, S. (1984). Unemployment and suicidal behavior. *Social Science & Medicine, 19,* 93-115.

Stack, S. (1980). Domestic integration and the rate of suicide. *Journal of Comparative Family Studies, 11,* 249-260.

Stack, S. (1981a). The effect of immigration on suicide. *Basic & Applied Social Psychology, 2,* 205-218.

Stack, S. (1981b). Suicide and religion. *Sociological Focus, 14,* 207-220.

Table 1
Suicide Rates by Age in Canada and the United States

	Age group						
	15-24	25-34	35-44	45-54	55-64	65-74	75+
Canada							
1970							
male	15.6	20.1	26.6	27.9	31.9	28.0	24.6
female	4.8	8.6	10.6	14.5	11.4	9.5	4.6
1980							
male	24.8	29.5	25.1	30.7	28.5	26.9	38.1
female	5.4	8.1	8.8	13.7	12.1	9.5	5.9
1990							
male	24.6	29.6	26.7	23.4	22.6	20.7	32.4
female	5.0	6.4	9.0	7.4	5.4	5.9	4.2
United States							
1970							
Male	13.5	19.6	22.2	27.8	32.8	36.5	41.8
Female	4.2	8.6	12.1	12.5	11.4	9.3	6.7
1980							
male	20.2	24.8	22.3	23.0	24.4	30.2	43.5
female	4.3	7.0	8.4	9.4	8.4	6.5	5.4
1989							
male	22.2	24.3	22.8	22.4	24.6	33.0	54.2
female	4.2	5.6	6.6	7.3	7.3	5.9	5.9

Table 2
Results of the multiple regression analysis and the prediction of the Canadian suicide rate

	b coefficient	Canadian raw score*	contribution to Canadian suicide rate
birth rate	0.5705	154	87.8570
divorce rate	0.0508	258	13.1064
alcohol consumption	0.0530	853	45.2090
% elderly	1.1832	89	105.3048
blood type	-0.8935	409	-365.2370
constant	257.0776		257.0776

multiple R = 0.76
predicted Canadian suicide rate: 143 per one million per year
actual Canadian suicide rate: 141 per one million per year

* decimal points were omitted in the analysis

MORAL DECISIONS INVOLVING EUTHANASIA AND SUICIDE[37]

DAVID LESTER

Abstract: Recent neuroscientific research on how people respond to personal and impersonal moral dilemmas is applied to explain why individuals are more comfortable with passive euthanasia than active euthanasia and why suicidal individuals use tactics to reduce the role of emotions in the decision to commit suicide.

Greene, et al. (2001) compared the brain responses of people to personal and impersonal moral dilemmas. They presented subjects with two types of moral dilemmas. In the impersonal moral dilemma, a train is approaching a junction, and it cannot be stopped. On one of the two possible tracks, five people are working and will be killed by the train. On the other possible track, one person is working and will be killed by the train. Will you divert the train to the track with one worker? Almost all respondents say "Yes," and they make the decision quickly.

In the personal dilemma, there is only one track with five people working on it who will be killed by the train. The only way to stop the train is to push an individual who is sitting on a bridge off onto the track so that his body stops the train. Will you do it? The majority of respondents say "No," and those who say "Yes" take much longer to make the decision than those who say "No." (It should be noted that from a simple utilitarian point of view, the answer should be "Yes" in both cases. Five people would be saved for the cost of one life.)

Greene et al. found that the brain regions that were more active in the "personal" dilemma than in the impersonal dilemma (e.g., the posterior cingulate gyrus) were those associated with emotional arousal, while areas associated with cognitive processing (e.g., the right middle frontal gyrus) were less active in the "personal" dilemma than in the "impersonal" dilemma.

Greene et al. concluded that emotion can play an important role in moral judgments. Pulling a switch is an impersonal act, and the decision is made quickly. It involves cognitive reasoning and there is less emotional involvement. Pushing a person off a bridge to be killed entails a very "personal" involvement. Emotion plays a large role, and the decision to over-ride the emotional reaction by cognitive reasoning takes time.

Application to Passive and Active Euthanasia

It has been found that medical personnel are more comfortable with passive euthanasia (for example, letting the batteries on life-sustaining equipment run down, so that the equipment

[37] Address enquiries to David Lester at lesterd@stockton.edu.

stops functioning and the patient dies) than with active euthanasia (for example, turning off the electrical supply to life-sustaining equipment). Why is this so?

The parallel with impersonal and personal moral dilemmas is clear. Passive euthanasia (such as letting the batteries energizing medical equipment run down) requires less personal involvement. Calm reasoning can operate, and the decision is made more easily. Actually turning off the life-sustaining equipment is a more "personal" action and produces an emotional reaction which cognitive reasoning has to overcome.

Application to Suicide

Suicide is, in most religions, an immoral act. Jacobs (1967) called suicide a violation of the sacred trust of life. In his examination of suicide notes, Jacobs documented how would-be suicides try to persuade themselves, others and God that their suicide is morally justifiable. They may assert that God will understand, and they ask others to pray for them. They also frequently change their religious beliefs so that they come to believe that suicide will be forgiven.

Dying by suicide is a very "personal" act. There will typically be an emotional reaction and a cognitive appraisal involved in the decision to commit suicide. The research of Greene, et al. reviewed above suggests that it takes time for the cognitive appraisal to overcome the emotional reaction.

There may also be other cognitive maneuvers employed to reduce the role of emotions in the decision. For example, Spiegel and Neuringer (1963) found that completed suicides tend to avoid the use of the word suicide and suicide synonyms in their suicide notes, and they suggested that this was to reduce the dread (an emotional reaction) of dying by suicide. These maneuvers may be facilitated by ingesting alcohol or other drugs (such as marijuana) prior to the suicidal act, a phenomenon observed by Chiles, et al. (1986). By reducing the role of emotions, the decision to commit suicide may be made more quickly and using primarily cognitive processes.

Related to this is the common observation that the mood of suicides tends to improve, and they seem calmer prior to the suicidal act, both in the short-term (e.g., Clements, et al., 1985; Keith-Spiegel &Spiegel, 1967) and in the months leading up to the act (e.g., Pennbaker & Stone, 2004: Barnes, Lawal-Solarin & Lester, 2007). The role of emotions in the decision to commit has been reduced.

References

Barnes, D. H., Lawal-Solarin, F. W., & Lester, D. (2007) Letters from a suicide. *Death Studies*, 31, 671-678.

Chiles, J., Strosahl, K., Cowden, L., Graham, R., & Linehan, M. (1986) The 24 hours before hospitalisation. *Suicide & Life-Threatening Behavior*, 16, 335-342.

Clements, C., Bonacci, D., Yerevanian, B., Privitera, M., & Kiehne, L. (1985) Assessment of suicide risk in patients with personality disorder and major affective disorder. *Quality Review Bulletin*, 11(5), 150-154.

Greene, J. D., Sommerville, R. B., Nystrom, L. E., Darley, J. M., & Cohen, J. D. (2001) An fMRI investigation of emotional engagement in moral judgment. *Science*, 293, 2105-2108.

Jacobs, J. (1967) A phenomenological study of suicide notes. *Social Problems*, 15, 60-72.

Keith-Spiegel, P., & Spiegel, D. E. (1967) Affective states of patients immediately preceding suicide. *Journal of Psychiatric Research*, 5, 89-93.

Pennebaker, J. W., & Stone, L. D. (2004) What was she trying to say? In D. Lester (Ed.) *Katie's diary* (pp. 55-79). New York: Brunner-Routledge.

Spiegel, D., & Neuringer, C. (1963) Role of dread in suicidal behavior. *Journal of Abnormal & Social Psychology*, 66, 507-511.

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Unpublished Essays on Suicide from the 1980s: David Lester

I wrote several essays in the 1980s on request from editors of books that were never published. This file contains those essays.

#1

EMPIRICAL RESEARCH ON BEREAVEMENT AFTER SUICIDE

David Lester

When a person dies, those close to the deceased typically experience great sorrow, but the precise nature of the emotions experienced probably depends upon the cause of death. A death which is sudden and unexpected may have different consequences for the survivors than a death which was anticipated and for which the survivors had time to prepare. Even among unexpected deaths, the nature of the death may have an impact. Death from murder may leave survivors with different emotions than death from suicide or natural causes.

Death from suicide may result in a more complex and intense set of emotional responses, including sadness grief, anguish, as well as anger and guilt. Other emotions are aroused by the stigma that society attaches to suicide. The suicide of a person suggests the presence of psychiatric disorder in him (or her), and this leads to the suspicion that the whole family is psychiatrically disturbed. If the suicide was a respected and admired person in the community, friends may wonder what the relatives of the suicide did which drove the individual to take his own life.

To explore these issues, research into the aftermath of suicide have taken two separate approaches. The first strategy has been to ask the survivors of a suicide about their experiences, while the second strategy has been to ask members of the general public how they would view the survivors of a suicide. The first strategy focusses on the bereavement experience of the survivors of the suicide, while the second strategy focusses on the stigma that the survivors may have to face.

Research on the Bereaved

As Rudestam (1990) has pointed out, it is critically important to include an appropriate comparison group in studies of the bereaved survivors of a suicide. It is obvious that the survivors of a suicide will experience psychological and physical dysfunctions as part of the grief process. The crucial question, however, is whether these experiences differ from the grief process after a nonsuicidal death.

I have already mentioned that sudden and unexpected deaths may change the nature of the grief. In addition, suicide may lead to reactions because the death was violent, guilt because the survivors feel they ought to have somehow intervened and prevented the suicide, and anger at the suicide for choosing to die in that particular manner. A suicidal death also has an effect on the mourning rituals, such as the funeral and religious services, and may lead to withdrawal of support from social networks because of the discomfort felt by neighbors and friends. Finally, the occurrence of a suicide suggests that the family system was dysfunctional already, and such a dysfunctional family may have more difficulty in coming to terms with the death of a family member.

In a novel approach to this issue, Calhoun, Selby and Steelman (1988-1989) asked

funeral directors whether the mourners of a suicide differ from those of a natural death. Two main themes emerged. Family members of a suicide seemed to experience greater shock and more difficulty in dealing with the death, and the suicidal deaths seemed to generate more questioning in the mourners. The funeral directors themselves felt more constrained in dealing with the family of a suicide and had more difficulty in expressing sympathy and knowing what to say or do.

In studies of the emotional reactions of the bereaved, Rudestam (1977), for example, has documented relief, anger and depression in survivors of suicides, but research on those losing loved ones from other causes have shown that these emotions occur equally often in those individuals too (Calhoun, Selby and Selby, 1982). The guilt experienced, however, does seem to be stronger in the survivors of a suicide (Glick, Weiss and Parkes, 1974).

Cognitive reactions in the survivors of suicide include shock and disbelief, a search for explanations, and denial. Studies which have included a comparison group have indicated that the search for explanations is more intense if the deceased was a suicide and less easily resolved (Sheskin & Wallace, 1976).

Studies of the physical health of the bereaved and the patterns of interaction in the surviving family of a suicide have not yet compared the reactions with those from people surviving a death from other causes.

The circumstances of the suicide have been found to affect the resolution of these reactions. For example, Rudestam (1977) found that family members who discovered the body of the suicide were slower in recovering. The suicide can also make the resolution of grief difficult by the way he kills himself. For example, a person who shoots himself in the head, thereby disfiguring himself, in a locale where a loved one will discover his body is clearly expressing anger toward the survivor.

The Reactions of the Community to Suicide

Calhoun and his associates have conducted a number of studies which have explored how people react to suicidal deaths. For example, Calhoun, Selby and Faulstich (1982) found that people viewed the parents of the child more unfavorably if the death of the child was from suicide rather than a virus. The parents of the suicidal child were viewed as more psychologically disturbed and more responsible for the child's death.

In a later study, Calhoun, Selby and Walton (1985-1986) extended the focus of the study to adult deaths. They found that the surviving spouse of a deceased person was viewed as more to blame, more likely to feel ashamed of the cause of death, and more able to have prevented the death than the surviving spouse of a car accident victim or a leukemia patient.

Calhoun, Selby and Abernathy (1986) asked college students about the social rules for interacting with bereaved persons. Reliable differences emerged for the survivors of a suicide. Saying that death was the best was viewed as significantly less appropriate for suicides and accidents than for leukemia, while telling the survivors that one knows the cause of death and

talking about people who died in the same way was viewed as less appropriate for suicides. These findings suggest that those who could provide support for survivors feel more socially constrained when the death is from suicide. Calhoun found a lack of clarity about what to do for the survivors of a suicide, but greater clarity on what not to do!

These findings are supported by direct interviews with survivors of suicides. Sheskin and Wallace (1976) found that widows of suicides did experience less social support, more loneliness, and more isolation than other widows.

Range and Kastner (1988) found that the stigma attached to the survivors of a suicide was also present for those close to someone who has attempted suicide. Parents of a psychiatrically hospitalized child were viewed as less psychiatrically disturbed themselves than parents of a child who had attempted suicide. A visit to the parents of a suicide attempter was expected to be more tense. In general, the responses to the family of a child who attempted suicide were identical to those to a family of a child who had died from suicide.

Discussion

In their review of the research, Calhoun, Selby and Selby (1982) noted that no study had yet administered exactly the same interview or questionnaire to comparable groups surviving suicidal deaths and other types of death. Thus, the conclusions from the research must be regarded as tentative. However, the more intense search for an understanding of what led up to the death and the lower levels of social support do seem to be well substantiated for survivors of suicide.

We might also note that there have been few proposals of how the survivors of suicides might be helped to resolve both the general and the specific problems they experience. Might public education programs reduce the social isolation experienced by survivors of suicide? What forms might such education programs take? Attention also needs to be given to those who might interact with the bereaved to ensure that they have an awareness of the special problems facing the survivors of suicide. Goldney, Spence and Moffit (1987) found that, in general, the responses of social workers in Australia to questions about the appropriate social response to suicide were congruent with those of the survivors, while the responses of the general public were often less empathic. The results of this study are encouraging, but efforts need to be made to educate mental health professionals in general on the particular problems faced by survivors of suicide.

In addition, counseling strategies for survivors need to be developed. In recent years, self-help groups for survivors have been set up in many communities, some of which focus especially on survivors of suicide (Lukas & Seiden, 1987), but no exploration of which techniques work best for which clients has appeared and no formal evaluation of the effectiveness of these self-help groups has been made.

References

Calhoun, L. G., Selby, J. W., & Abernathy, C. (1984). Suicidal death. *Journal of Psychology, 116,* 255-261.

Calhoun, L. G., Selby, J. W., & Selby, L. E. (1982). The psychological aftermath of suicide. *Clinical Psychology Review*, 2, 409-420.

Calhoun, L. G., Selby, J. W., & Faulstich, M. (1982). The aftermath of childhood suicide. *Journal of Community Psychology*, *10*, 250-254.

Calhoun, L. G., Selby, J. W., & Steelman, J. (1988-1989). A collation of funeral directors' impressions of suicidal deaths. *Omega*, *19*, 365-373.

Calhoun, L. G., Selby, J. W., & Walton, P. B. (1985-1986). Suicidal death of a spouse. *Omega*, *16*, 283-288.

Glick, I. O., Weiss, R. S., & Parkes, M. P. (1974). *The first year of bereavement*. New York: Wiley.

Goldney, R. D., Spence, N. D., & Moffit, P. F. (1987). The aftermath of suicide. *Journal of Community Psychology*, *15*, 141-148.

Lukas, C., & Seiden, H. M. (1987). *Silent grief*. New York: Scribners.

Range, L. M., & Kastner, J. W. (1988). Community reactions to attempted and completed child suicide. *Journal of Applied Social Psychology*, *18*, 1085-1093.

Rudestam, K. E. (1977). Physical and psychological responses to suicide in the family. *Journal of Consulting & Clinical Psychology*, *45*, 162-170.

Rudestam, K. E. (1990). Survivors of suicide. In D. Lester (Ed.) *Current issues in suicide research*. Philadelphia, PA: Charles Press.

Sheskin, A., & Wallace, S. E. (1976). Differing bereavements. *Omega*, *7*, 229-242.

#2

SUICIDOLOGY: AN INTRODUCTION

David Lester

The study of suicide has been truly an interdisciplinary endeavor, and the behavior has raised issues and problems for several professions. This review of the field is divided into three main sections (etiology, prevention, and social implications) and is organized around the different disciplines involved.

The Etiology of Suicide

Sociology

The sociological study of suicide has a long history, but modern studies received an impetus from Emile Durkheim's (1897) book on the topic. Durkheim acquired great stature in the field of sociology, and the fact that he devoted a major scholarly work to suicide gave suicide a legitimate place in the field.

Durkheim also provided that major theoretical explanation for the variation in social suicide rates (such as those of nations). He proposed that suicide rates were determined by the degree of both social integration and social regulation in a society. Suicide will be common when either of these social variables is very weak (egoistic and anomic suicide respectively) or very strong (altruistic and fatalistic suicide respectively).

More recent theories can usually be seen as derivatives of Durkheim's ideas. For example, Gibbs and Martin's (1964) theory of suicide develops Durkheim's notion of social integration, while Henry and Short's (1954) theory develops his notion of social regulation.

Research on the association between divorce and suicide illustrates the type of research resulting from Durkheim's ideas. Divorce can be easily viewed as reducing the degree of social integration of people and as a sign of reduced social regulation. In line with this reasoning, the divorce rates of regions (such as the states of America or nations of the world) are strongly associated with the suicide rates of those regions (Stack, 1981). Furthermore, at the individual level, divorced people have higher suicide rates than those who are single or married (Kreitman, 1988). However, divorce rates also appear to be an index of an abstract social quality (perhaps related to social integration or regulation), for regions with high divorce rates have high suicide rates for the single, the married and the widowed as well as the divorced (Moksony & Lester, in preparation).

In recent years, sociologists have also shown an interest in the possibility that suicide may be suggested by media presentations on suicide. David Phillips and others have conducted a great deal of research to show, for example, that newspaper publicity of the suicide of a celebrity causes a rise in the suicide rate in the following week (Phillips, 1974).

Sociologists have primarily focused their attention on completed suicides (those who

die), and Lester (1989a) has urged sociologists to address the social variations in rates of attempted (non-lethal) suicide and suicidal ideation.

Psychiatry

Psychiatrists have also a long history of interest in suicide primarily because, of course, they are often responsible for treating suicidal patients. Suicide has been shown clearly to be more common in those who are psychiatrically disturbed. Etiological explanations of suicide, therefore, tend to vary with the prevailing views on the etiology of psychiatric disorder. In the 1980s, psychiatry has focused on biochemical explanations of psychiatric disorder, and this has resulted in a profusion of biochemical studies of suicidal people. Several reviews of this literature have appeared (Maris, 1986; Lester, 1988a).

Reviewers of the field draw different conclusions, but Lester has concluded that the evidence is good for abnormal responding on the dexamethasone suppression test, lower levels of 5-hydroxyindoleacetic acid in the cerebrospinal fluid, and lower levels of serotonin in some regions of the brain of suicides. All of these abnormalities suggest the involvement of the serotonergic neurotransmitter system in suicide. However, the fact that the major theory of psychiatric depression is serotonergic suggests that this research has simply confirmed that suicidal people are usually depressed.

Other investigators suspect that the serotonergic abnormality in suicides is also responsible for their impulsive assaultive aggression (Brown and Goodwin, 1986), but the evidence for this is less clear.

In the 1960s, psychiatry was more enthusiastic about the role of experiential and interpersonal factors in the causation of psychiatric disorders. This orientation can be still be found in the work of some scholars, such as Joseph Richman (1986) who has documented the role of the family in precipitating suicidal behavior in general and Cynthia Pfeffer (1986) who has focused on the suicidal child.

Psychology

The other major discipline which ought to be interested in suicide, psychology, displays a noteworthy caution. Psychologists prefer to study behaviors which can be brought into the laboratory for experimental study (in which the independent variable can be manipulated by the experimenter). Suicide is not open to this type of research. Furthermore, no major psychological theorist has considered the problem of suicide (Lester, 1988b), and so the topic has not acquired the legitimacy that Durkheim conferred on it for sociologists. Recently, however, Lester (1988b) has shown that much psychological research on suicide is consistent with hypotheses derived from Freudian theory, George Kelly's Personal Construct theory, and learning theory.

Although Freud never devoted an entire book (or even a major article) to suicide, references to suicide can be found throughout his writings. Litman (1966) collected these and synthesized them into a coherent theory of suicide. Loss of a loved object with whom the child had identified in the early years of life was felt to be critical in the genesis of suicide. After the

loss, the anger that the child felt toward the lost person is blocked, inhibited, and turned inward upon the self, resulting in depression and suicide. This approach casts suicide as a behavior similar to depression and opposite to anger directed outwards (such as assaultive violence and murder).

Lester (1987) tried to show the powerful influences that learning may have on the genesis of suicidal behavior. He showed how some self-destructive behaviors might be learned through the experience of particular forms of childhood punishment, while other forms can be seen as the result of a failure in socialization. He also showed how society might shape suicidal behavior by presenting suicidal people as models for imitation (such as celebrities who kill themselves) and by teaching people about new methods for suicide. For example, car exhaust suicides have risen dramatically in England in recent years as the people have learnt of the easy availability of this method for suicide (Clarke and Lester, 1989).

The major theoretical approach to suicide presently derives from the work of Aaron Beck on depression and hopelessness. Beck and his colleagues have shown that suicide is more common in those with high levels of depression and especially in those who have high levels of hopelessness, a cognitive component of the general syndrome of depression (Beck, et al., 1975).

This research has found great favor among psychotherapists, since the most popular forms of psychotherapy in the 1980s have been the cognitive therapies which focus on changing the distorted and irrational thinking patterns of suicidal patients.

Anthropology

Anthropologists continue to describe the motivations of suicide in primitive societies, coming close to the ethnomethodological approach of sociologists. Dorothy Counts (1988), for example, has provided accounts of the precipitation of suicide in women in Papua New Guinea.

Raoul Naroll (1962) stimulated the statistical examination of samples of primitive societies by showing that anthropological estimates of suicide rates had a reasonable degree of reliability. Krauss (1970), for example, showed that primitive societies with an intermediate level of social complexity had the highest suicide rates.

Epidemiology

Epidemiologists have documented suicide trends in particular social groups. In the 1970s, there was concern over suicide rates in native Americans and the elderly. In the 1980s, concern has shifted to the high rate of suicide in teenagers. Epidemiologists in the past focused on completed suicides, but more effort is now being put into assessing the prevalence of non-lethal suicidal behavior and of suicidal ideation.

Biology

Biologists occasionally identify suicide-like behavior in lower organisms. Einsidler and Hankoff (1979) documented apparently suicidal behavior occurring in animals as a result of loss,

pain or overcrowding. Namdarti and Cabelli (1989) recently described a phenomenon in which some strains of the motile *Aeromonas* species occasionally produce acetic acid which destroys them and called this suicide. In addition, Denys de Catanzaro (1981) has tried to fit suicidal behavior into a sociobiological framework.

The Prevention of Suicide

Therapy

The treatment of suicidal individuals, especially those who have already attempted suicide or who are severely depressed continues to be a major thrust of suicide prevention. Accurate psychiatric diagnosis combined with the prescription of a suitable medication can serve to effectively lessen the individual's suicidal potential (Montgomery and Montgomery, 1984)

Psychotherapy is also effective, and while psychotherapists of most of the major systems of psychotherapy work with suicidal patients, the major focus in the 1980s has been on the use of cognitive therapy, first developed by Albert Ellis (1973) and more recently extended by Aaron Beck (1976). Cognitive therapy is based on the assumption that negative moods and inappropriate behavior is typically a result of irrational and distorted patterns of thinking. Modification of these dysfunctional patterns often leads to improvement in the patient, and many therapists have reported on the use of cognitive therapy for suicidal individuals (Diekstra, et al., 1988).

Survivors of Suicide

Concern with helping those who have survived the loss through suicide of a loved one has grown in the 1980s, and large numbers of "survivor" groups now exist whose function is to provide support and counseling for those who have suffered such a loss (Lukas and Seiden, 1987).

Public Health

The major public health efforts in suicide prevention in recent years have been the establishment of suicide prevention centers and the sensitization of people to the signs of high suicidal risk.

Following the lead of the Los Angeles Suicide Prevention Center in the 1950s (Farberow and Shneidman, 1961), many communities set up suicide prevention centers or crisis intervention services in American communities, so that by the 1980s over 200 were in existence. Most of the centers are staffed by volunteers trained in crisis intervention and supervised by professionals. They typically run 24-hour telephone counseling services, but some centers have walk-in clinics while a few have outreach services (Lester and Brockopp, 1973). In recent years, many centers have oriented their efforts toward special groups, especially teenagers, and some have focused on working with survivors, the friends of relatives of those who have killed themselves.

Although early research found no evidence for their effectiveness in preventing suicide,

more recent research has indicated that they may be effective in preventing suicide (Lester, 1989c).

A second major effort has been in the education of people about the signs that indicate that an individual is at risk for suicide. This education is especially useful for those who are mental health professionals, but it is also useful for those who come into contact with distressed individuals in the community, such as ministers and priests, lawyers, police officers, and even bartenders and hair dressers. Much of the focus in schools reacting to the suicide of a student is on sensitizing teachers and parents to the cues that predict a high risk of suicide.

In recent years a third public health approach has been suggested, focused on preventing the easy availability of lethal methods for suicide to the general public. Clarke and Lester (1989) have documented that reduction in the lethality of a method (such as detoxifying domestic gas and car exhaust) and in the availability of a lethal method (such as by strengthening handgun control laws) result in people using those methods less for suicide and, in some circumstances, reduce the overall suicide rate. Psychiatrists have responded to this approach, for example, by prescribing the less toxic medications and by reducing the size of prescriptions given to depressed patients.

Toxicology

Toxicologists have a double interest in suicide. On the one hand, suicide attempters ingest a variety of chemicals, and so toxicologists have an opportunity to investigate the effect that such chemicals have on the body. More practically, their efforts to save individuals who have ingested these chemicals improves with increasing experience. As a result, emergency rooms and poison control centers save a greater proportion of attempted suicides now than in the past and so, without fanfare, have proven to be one of the most effective suicide prevention approaches (Lester, 1989b).

Issues Concerning Suicide

Legal Liability

Both institutions (such as hospitals and jails) and individual psychotherapists have faced lawsuits from relatives of suicides who have claimed negligence in the handling of the deceased. As a result, a number of authors have suggested guidelines for individuals to follow when dealing with suicidal individuals or for survivors when suing for negligence (Bursztajn, et al., 1983; Olivero, et al., 1989).

Forensic Pathology

Forensic pathology is concerned with the accurate determination of death. Often, pathologists have difficulty in determining whether a death was natural, accidental, suicide or murder. Occasionally coroners utilize psychological autopsies (Curphy, 1961; Weisman & Kastenbaum, 1968), that is, a psychological examination of the last few weeks of the deceased's life to see whether it fits the profile for one type of death better than another.

However, this is not simply an issue for the medico-legal system. Sociologists often use official suicide rates for their research, and concern that these rates may not be accurate raises questions about the validity of their research. Douglas (1967) drew attention to this problem for sociologists, while others have easily documented the inaccurate classification of death by coroners (O'Carroll, 1989). Part of the reason for the inaccurate classification of death is that very few jurisdictions have the services of a trained forensic pathologist.

Philosophy and the Right to Die

The morality of suicide continues to be the focus of debate. Not only is this an interesting philosophical issue (Battin & Maris, 1983) but it also has serious implications for groups which have been established to assist people in dying by suicide, such as The Hemlock Society in America. Euthanasia and rational suicide have been controversial issues for many years, but the advent of AIDS with its crippling physical, mental, and financial consequences has led to the issues being of immediate concern to AIDS patients today.

Conclusions

Suicide continues to puzzle us. In some ways, suicide resembles the decay of radioactive atoms. It is hard to predict the action of the individual, but easier to predict the behavior of the multitude. It is easy, for example, to predict the suicide rate in the USA next year, but almost impossible to pick out which particular individuals will kill themselves. The involvement of scholars from so many disciplines provides hope that our understanding of suicide will improve significantly in the near future.

References

Battin, M., & Maris, R. *Suicide and ethics*. New York: Human Sciences Press, 1983.

Beck, A. T. *Cognitive therapy and the emotional disorders*. New York: International Universities Press, 1976.

Beck, A. T., Kovacs, M., & Weissman, A. Hopelessness and suicidal behavior. *Journal of the American Medical Association*, 1975, 234, 1146-1149.

Brown, G., & Goodwin, F. Human aggression and suicide. *Suicide & Life-Threatening Behavior*, 1986, 16, 223-243.

Bursztajn, H., Gutheil, T., Hamm, R., & Brodsky, A. Subjective data and suicide assessment in the light of recent legal developments. *International Journal of Law & Psychiatry*, 1983, 6, 331-350.

Clarke, R. V., & Lester, D. *Suicide: closing the exits*. New York: Springer-Verlag, 1989.

Counts, D. A. Ambiguity in the interpretation of suicide. In D. Lester (ed.) *Why women kill themselves*. Springfield: Thomas, 1988, 87-109.

Curphy, T. J. The role of the social scientist in the medicolegal certification of death from suicide. In N. L. Farberow & E. S. Shneidman (Eds.) *The cry for help*. New York: McGraw-Hill, 1962, 110-117.

de Catanzaro, D. *Suicide and self-damaging behavior*. New York: Academic, 1981.

Diekstra, R. F. W., Engels, G. I., & Methorst, G. J. Cognitive therapy of depression. *Crisis*,

1988, 9, 32-44.
Douglas, J. D. *The social meanings of suicide*. Princeton: Princeton University Press, 1967.
Durkheim, E. Le suicide. Paris: Felix Alcan, 1897.
Einsidler, B., & Hankoff, L. D. Self-injury in animals. In L. Hankoff & B. Einsidler (eds.) *Suicide. Littleton, MA: PSG, 1979, 131-139.*
Ellis, A. *Humanistic psychotherapy*. New York: Julian, 1973.
Farberow, N. L., & Shneidman, E. S. *The cry for help*. New York: McGraw-Hill, 1961.
Gibbs, J. P., & Martin, W. T. *Status integration and suicide*. Eugene, OR: University of Oregon Press, 1964.
Henry, A. F., & Short, J. F. *Suicide and homicide*. New York: Free Press, 1954.
Krauss, H. Social development and suicide. *Journal of Cross-Cultural Psychology*, 1970, 1, 159-167.
Kreitman, N. Suicide, age and marital status. *Psychological Medicine*, 1988, 18, 121-128.
Lester, D. *Suicide as a learned behavior*. Springfield: Thomas, 1987.
Lester, D. *The biochemical basis of suicide*. Springfield: Thomas, 1988a.
Lester, D. *Suicide from a psychological perspective*. Springfield: Thomas, 1988b.
Lester, D. Suicide from a sociological perspective. Springfield: Thomas, 1989a.
Lester, D. *Can we prevent suicide?* New York: AMS, 1989b.
Lester, D. *Suicide: the state of the art*. Philadelphia: Charles Press, 1989c.
Lester, D., & Brockopp, G. W. *Crisis intervention and counseling by telephone*. Springfield: Thomas, 1973.
Litman, R. E. Sigmund Freud on suicide. *Psychoanalytic Forum*, 1966, 1, 206-214.
Lukas, C., & Seiden, R. H. *Silent grief*. New York: Scribners, 1987.
Maris, R. *Biology of suicide* New York: Guilford, 1986.
Moksony, F., & Lester, D. Divorce and suicide. In preparation.
Montgomery, S., & Montgomery, D. The prevention of suicidal acts in high-risk patients. *Advances in Biochemistry & Psychopharmacology*, 1984, 39, 315-317.
Namdari, H., & Cabelli, V. J. The suicide phenomenon in motile aeromonads. *Applied Environmental Microbiology*, 1989, 55, 543-547.
Naroll, R. *Data quality control*. Glencoe: Free Press, 1962.
O'Carooll, P. A consideration of the validity and reliability of suicide mortality data. *Suicide & Life-Threatening Behavior*, 1989, 19, 1-16.
Olivero, J. M., Roberts, J. B., & Clark, A. M. Jail suicide and legal redress. In D. Lester (Ed.) *Suicide'89*. Denver: American Association of Suicidology, 1989.
Pfeffer, C. R. *The suicidal child*. New York: Guilford, 1986.
Phillips, D. P. The influence of suggestion on suicide. *American Sociological Review*, 1974, 39, 340-354.
Richman, J. *Family therapy for suicidal people*. New York: Springer, 1986.
Stack, S. Divorce and suicide. *Journal of Family Issues*, 1981, 2, 77-90.
Weisman, A. D., & Kastenbaum, R. The psychological autopsy. *Community Mental Health Journal*, 1968, Monograph #4.

#3

THOSE WHO MAKE REPEATED ATTEMPTS AT SUICIDE

David Lester

Many years ago, I was on a television program about suicide which took calls from viewers. With only a couple of minutes before the end of the program, a call came from a woman whose alcoholic husband continually beat their children and threatened suicide. What should she do? Luckily, the question was given to a colleague of mine to answer. Her thirty-second response was that, as long as he kept beating the children, he probably would not kill himself. But if he stopped beating the children, the risk of his suicide was greater. I remember thinking what a good response that was from a theoretical perspective and how useless it probably was from the point of view of that wife. This anecdote does, however, indicate the difficulties of living with and, for the therapist, counseling the chronically suicidal individual.

In the 1970s, suicide researchers began to focus on those suicidal individuals who make repeated attempts at suicide, surviving each time. One of the earliest suggestions was that these individuals were not really suicidal, that is, they did not intend to kill themselves. Kreitman and his British colleagues (Kreitman, et al., 1969) suggested therefore that the term attempted suicide should be abandoned and replaced with *parasuicide* for first-time attempters and especially for multiple attempters, and European journals today still use the word parasuicide. However, the 1980s have witnessed a growth in the use of the term *self-injurer* or for those taking overdoses *self-poisoners* for first-time and repeated suicide attempters. These terms clearly avoid the implication that repeaters are trying to kill themselves.

Research into those who make multiple attempts at suicide has revealed that they are more often diagnosed as having an antisocial or other type of personality disorder, more likely to have received psychiatric treatment in the past, more likely to be unemployed and to have a criminal record, and more likely to be alcohol abusers (Lester, 1983). Occasional studies have suggested that repeaters are more often younger, female and from the lower social classes. Thus, repeaters appear to have a chronic maladaptive life style in many respects of which multiple suicide attempts appear to be but one component.

Lester (1987) noted also that regional studies of repeaters indicate that the rates of this behavior are higher in regions where indices of social disorganization are higher including overcrowding and poverty. Thus, it seems that the chronic suicide attempter is a social deviant who comes from locales where social deviance is common. Families in these areas often fail to discipline their children and teach them the values of the larger society. They also fail to encourage them in interests and activities which would serve as deterrents to deviant behavior.

The children in these areas may grow up, therefore, without acquiring the attitudes and skills necessary for achieving long-term goals. They will be more likely to prefer short-term goals and engage in behaviors concerned with drugs, delinquency and suicide attempts. There may be a sex difference here, with boys choosing behaviors such as drugs and crime more while girls choose suicide attempts more. A suicide attempt for such a person may be a cathartic act and bring about an immediate response from others.

An interesting question is why people in these locales turn to suicidal behavior rather than drugs or crime. It may be that the choice is sex-linked as already mentioned, or it may be related to such factors as the availability of illegal drugs in the area, the presence of a support group (or gang), parental models, and the behavior of peers. There is a great deal of evidence that suicidal behavior can be copied from others, leading to clusters of suicidal behavior in some communities (Coleman, 1987).

Treating the Repeat Attempter

Although the majority of repeat attempters do not eventually kill themselves, the risk of suicide in such people is greater than that of nonsuicidal individuals. Perhaps as many as 15 percent of the repeaters eventually kill themselves as compared to only one percent of the general population.

The conceptualization presented here of the repeater as an unsocialized person suggests that treatment could focus on and correct their lack of socialization. Repeaters need to be encouraged to join the dominant culture and to adopt the values of this culture. Their focus on short-term and manipulative behavior is evidence of immaturity and perhaps a lack of interpersonal and social skills. Providing these skills through such programs as assertiveness training and group therapy might help them. Providing education and vocational training might also facilitate their joining the work force and their transition to a focus on long-term goals. Since the clinical picture of the repeater has characterized them as likely to have a personality disorder, recent work on the application of cognitive therapy to those with personality disorders (Beck and Freeman, 1990) suggests also that cognitive therapeutic strategies may be useful in helping repeaters to change their life style.

References

Beck, A. T., & Freeman, A. (1990). *Cognitive therapy and personality disorders*. New York: Guilford.

Coleman, L. (1987). *Suicide clusters*. Boston, MA: Faber & Faber.

Kreitman, N., Philip, A. E., Greer, S., & Bagley, C. R. (1969). Parasuicide. *British Journal of Psychiatry*, *115*, 747-748.

Lester, D. (1983). *Why people kill themselves*. Springfield, IL: Charles Thomas.

Lester, D. (1987). *Suicide as a learned behavior*. Springfield, IL: Charles Thomas,.

#4

COPING WITH SUICIDE IN SUBSTANCE ABUSERS

David Lester

Substance abuse is sometimes viewed as a self-destructive, even suicidal behavior. For example, Karl Menninger (1938) called substance abuse *chronic suicide*, implying that it was a manifestation of the death instinct in which the individual kills himself over a drawn-out period of time. Others have argued that suicide and substance abuse may be expressions of the same underlying variable, perhaps a social variable such as social disorganization or an intrapsychic variable such as a self-destructive personality.

Whatever the theoretical relationship between suicide and substance abuse, substance abusers do have a higher incidence of suicidal behavior than non-abusers. Here too many causal chains can be proposed. Perhaps the psychological state that leads a person to contemplate and act-out suicidal ideas is similar to that which leads people to use alcohol and drugs? Or perhaps the use of alcohol and drugs disrupts a person's life to such an extent that suicide becomes a more viable option?

A recent review of research into suicide and substance abuse (Lester, 1991) revealed that alcoholics do have a very high incidence of both attempted suicide and completed suicide. For example, one community survey revealed that 24 percent of the alcoholics had attempted suicide while only five percent of the non-abusers had done so (Weissman, et al., 1980). A high rate of completed suicide has also been reported in alcoholics (Berglund & Tunving, 1985). Similarly, high rates of suicidal behavior have been reported in narcotic addicts, cocaine addicts, and general drug abusers.

The result of this association is that, not only does the family of the substance abuser have to cope with the social stress created by the disturbed life of the abuser, but also they may frequently have to cope with the loss of the abuser through suicide.

Bereavement after Suicide

Reactions of the Survivors

When a person dies, those close to the deceased typically experience great sorrow, but the precise nature of the emotions experienced probably depends upon the cause of death. A death which is sudden and unexpected may have different consequences for the survivors than a death which was anticipated and for which the survivors had time to prepare. Even among unexpected deaths, the nature of the death may have an impact. Death from murder may leave survivors with different emotions than death from suicide or natural causes.

Death from suicide may result in a more complex and intense set of emotional responses, including sadness, grief, anguish, as well as anger and guilt. Other emotions are aroused by the stigma that society attaches to suicide. The suicide of a person suggests the presence of psychiatric disorder in him (or her), and this leads to the suspicion that the whole family is

psychiatrically disturbed. If the suicide was a respected and admired person in the community, friends may wonder what the relatives of the suicide did which drove the individual to take his own life. On the other hand, if the suicide was a problem person, then the survivors are left with unresolved anger toward the deceased, anger which may make them feel guilty after his or her death from suicide.

In studies of the emotional reactions of the bereaved, Rudestam (1977), for example, has documented relief, anger and depression in survivors of suicides, but research on those losing loved ones from other causes have shown that these emotions occur equally often in those individuals too (Calhoun, Selby and Selby, 1982). The guilt experienced, however, does seem to be stronger in the survivors of a suicide (Glick, Weiss & Parkes, 1974).

Cognitive reactions in the survivors of suicide include shock and disbelief, a search for explanations, and denial. Studies which have included a comparison group have indicated that the search for explanations is more intense if the deceased was a suicide and less easily resolved (Sheskin & Wallace, 1976).

The Reactions of the Community to Suicide

Sheskin and Wallace (1976) found that widows of suicides experienced less social support, more loneliness, and more social isolation than other widows. Range and Kastner (1988) found that the stigma attached to the survivors of a suicide was present also for those close to someone who has attempted suicide. Parents of a psychiatrically hospitalized child were viewed as less psychiatrically disturbed themselves than parents of a child who had attempted suicide. A visit to the parents of a suicide attempter was expected to be more tense. In general, the responses to the family of a child who attempted suicide were identical to those to a family of a child who had died from suicide.

Discussion

It can be seen, then, the families of substance abusers may have to cope not only with many years of erratic behavior from the substance abuser, but in the end may also have to cope with his or her death from suicide.

There have been few proposals of how the survivors of suicides might be helped to resolve both the general and the specific problems they experience, although in recent years, many support groups for survivors of suicide have appeared which appear to be quite useful in assisting the survivors of suicides through the difficult time after the suicide's death (Lukas & Seiden, 1987). It may be, however, that special support groups might be needed for those surviving the suicide of a substance abuser for these survivors may encounter coping problems more complex than the survivors of a non-substance-abusing suicide.

References

Berglund, M., & Tunving, K. (1985). Assaultive alcoholics 20 years later. *Acta Psychiatrica Scandinavica, 71,* 141-147.

Calhoun, L. G., Selby, J. W., & Selby, L. E. (1982). The psychological aftermath of suicide. *Clinical Psychology Review, 2,* 409-420.

Glick, I. O., Weiss, R. S., & Parkes, M. P. (1974). *The first year of bereavement*. New York: Wiley.

Goldney, R. D., Spence, N. D., & Moffit, P. F. (1987). The aftermath of suicide. *Journal of Community Psychology, 15,* 141-148.

Lester, D. (1991). Alcoholism and drug abuse. In R. Maris (Ed.) *Assessment and prediction of suicide*. New York: Guilford.

Lukas, C., & Seiden, H. M. (1987). *Silent grief.* New York: Scribners.

Menninger, K. (1938). *Man against himself*. New York: Harcourt, Brace & World.

Range, L. M., & Kastner, J. W. (1988). Community reactions to attempted and completed child suicide. *Journal of Applied Social Psychology, 18,* 1085-1093.

Rudestam, K. E. (1977). Physical and psychological responses to suicide in the family. *Journal of Consulting & Clinical Psychology, 45,* 162-170.

Sheskin, A., & Wallace, S. E. (1976). Differing bereavements. *Omega, 7,* 229-242.

Weissman, M. M., Myers, J. K., & Harding, P. S. (1980). Prevalence and psychiatric heterogeneity of alcoholism in a US urban community. *Journal of Studies on Alcohol, 41,* 672-681.

#5

ROMAN CATHOLICISM AS A DETERMINANT OF THE REGIONAL VARIATION IN SUICIDE RATES

David Lester

The sociological study of suicide rates is based in part upon the assumption that different societies have very different suicide rates and that these suicide rates remain stable over time. If these conditions are met, then societal suicide rates are amenable to study.

The particular societies chosen vary widely. Ideally, of course, societies consist of different nations or primitive societies. The success of this type of study led investigators to explore correlates of the suicide rates of smaller regions within a country. Studies have been conducted of states and counties in the USA, for example, and on wards or census tracts within one city.

Such studies may be seen as simply extending to smaller regions a methodology developed on nations. However, investigators often talk of different regions within a culture as having unique *subcultures*, thereby applying the theoretical notions that guided the cross-national studies to these smaller regions.

There may be some truth to the notion of subcultures, since regions within nations do differ considerably in social characteristics. Furthermore, the division of a country into regions may be no less artificial than the way in which some nations have been created in the course of history, so that even today, some nations seem torn apart by internal strife between the regions, while others feel kinship with neighboring regions in other countries.

A Study of Regions in America

Suicide and homicide rates show a wide variation over the states of America. The states, therefore, provide a convenient sample of regions to use for a regional study of suicide.

Durkheim's (1897) theory of suicide in societies was based on two dimensions. Suicide was hypothesized to be common in societies in which the degree of social integration (that is, the strength of the individual's social network) was very low (egoistic suicide) or very high (altruistic suicide). Similarly, suicide was hypothesized to be very common where the degree of social regulation (that is, the degree to which the individual's attitudes and values are shaped by the society) was very low (anomic suicide) or very high (fatalistic suicide).

Religion appears to reflect both social regulation and social integration, although it is unclear whether particular denominations involve more social regulation and social integration than others. Stack (1980) found no relation between the proportion of Roman Catholics in the states of the USA and suicide rates. Lester (1987), however, looked at measures of *religiosity* (for example, church attendance) and found a strong association between church attendance and suicide rates in the states.

Lester (1988) took a large set of social measures for the 48 continental states of the USA in 1980 and explored their association with the suicide rates of the states. The Pearson product-moment correlation between the percentages of Roman Catholics in each state and the suicide rates was only -0.10 and not significantly different from zero.

Lester subjected the thirty-seven social variables in his data set to a factor-analysis and identified seven orthogonal factors. The percentage of Roman Catholics was loaded positively and strongly on a factor with median family and personal income, the percentage urban population, the population and population density, the percentage of immigrants, and the crime rate, and negatively with the percentage in poverty and the percentage born in-state. Thus, the percentage of Roman Catholics in a state was part of a larger social characteristic, involving wealth and urbanization too, but scores on this factor were not associated with the suicide rates of the states (nor incidentally with their homicide rates).

In contrast, in a study of the counties of the USA, even after controlling for other variables, both Breault (1986) and Pescosolido and Georgianna (1989) have found that counties with a higher proportion of Roman Catholics have lower suicide rates. Pescosolido and Georgianna also reported that Evangelical Protestanism was associated with lower suicide rates while Institutional Protestantism was associated with higher suicide rates. So at this micro-regional level Roman Catholicism may be associated with lower suicide rates.

A Study of Nations

Simpson and Conklin (1989) have recently studied a large sample of seventy-one nations of the world and factor analyzed fourteen social variables. They identified four factors which they labeled economic development, Islamic, Christianity and Eastern bloc. The Christianity factor contrasted Roman Catholicism with Protestantism. They found that suicide rates were loaded (that is, associated with) the Islamic factor but not with the Christianity factor. Thus, Islamic nations had low suicide rates, while the proportion of Roman Catholics/Protestants appeared to be unrelated to suicide rates.

The problem here, of course, is that there are too few nations. There were 25 nations in 1964 with 80 percent or more of the population Roman Catholic as compared to only six nations with 80 percent or more of the population Protestant. Seventeen of the Roman Catholic nations were in Central and South America whereas all of the Protestant nations were in Europe. Restricting the sample to European nations, five of the Roman Catholic nations in Europe were the poorest. This leaves only three Roman Catholic nations and five Protestant nations in Europe with gross national products per capita in 1970 of $4000 or more, far too few for a meaningful statistical analysis. The 1970 suicide rates (per 100,000 per year) for these nations are shown below:

Roman Catholic		Protestant	
Austria	23.1	East Germany	29.6
Belgium	15.7	Denmark	22.4
France	15.5	Finland	22.1

Norway	8.2
Sweden	21.5

Changes in the USA over Time

Studies of the relationship between social variables over time in the USA and the suicide rate have indicated that the percentage of Roman Catholics is *positively* related to the suicide rate. For example, Yang (1990) found that the percentage of Roman Catholics was positively associated with the suicide rate, and this was true for the suicide rates of different age groups, both sexes and for whites and nonwhites.

Discussion

It seems to me that the social variable of whether people are Roman Catholic or Protestant is unlikely to be related directly to the suicide rate of a society. Several of the studies reviewed above find no association (those of the American states and of nations), while those that do report an association conflict (a negative association over counties versus a positive association over time in the USA).

These results are most likely to be the result of the mediating influence of other social variables. For example, the proportion of Roman Catholics in the USA has increased linearly since 1940. There have been many other linear social changes during this recent period, and it is very likely that it is these other social changes which have affected the suicide rate rather than Roman Catholicism. Perhaps some in-depth studies of suicide in *individuals* with different religious affiliations might help answer the question of whether Roman Catholics have a reduced risk of suicide.

References

Breault, K. D. (1986). Suicide in America. *American Journal of Sociology*, 92, 628-656.

Durkheim, E (1897). *Le suicide*. Paris: Felix Alcan.

Lester, D. (1987). An availability-acceptability theory of suicide. *Activitas Nervosa Superior*, 29, 164-166.

Lester, D. (1988). A regional analysis of suicide and homicide rates in the USA. *Social Psychiatry & Psychiatric Epidemiology*, 23, 202-205.

Pescosolido, B. A., & Georgianna, S. (1989). Durkheim, suicide, and religion. *American Sociological Review*, 54, 33-48.

Simpson, M. E., & Conklin, G. H. (1989). Socioeconomic development, suicide and religion. *Social Forces*, 67, 945-964.

Stack, S. (1980). Religion and suicide. *Social Psychiatry*, 15, 65-70.

Yang, B. (1990). The impact of the economy on suicide in different social and demographic groups. Eastern Economic Association, Cincinnati.

#6

DENIAL AND ACCEPTANCE IN SUICIDE

David Lester

Although suicidal intent is not *per se* an illness, it is a condition that is life-threatening, and it is of interest to explore whether denial and acceptance appear in the psychodynamics of the suicide and his or her significant others.

Denial and Acceptance in the Suicidal Individual

Denial

Does the suicidal person show evidence of denial? For many people, there is a stigma attached to suicide, and to admit that you are considering killing yourself may be embarrassing and shameful. It is found, for example, that those who kill themselves have often contacted a helping person (physician, lawyer, minister, etc.) in the months prior to the death (Yessler, et al., 1960). Yet suicide is *not* raised as a concern during these contacts. The suicidal person seems to ready to discuss the topic, contacts someone with this intent, but draws back from the discussion.

A similar phenomenon is found in depression where a smaller percentage of men than women seek treatment, but men who seek treatment are more depressed on the average than women who seek treatment. Men appear to be embarrassed about seeking treatment and put it off until the depression is severe (Silverman, 1968). This same reluctance to appear weak may account for their lack of prior direct communication about their suicidal intent.

Robins, et al. (1959) reviewed the various ways in which those about to kill themselves communicate this intent to others and found many indirect ways, such as calling old friends or in one case calling the mother of his ex-wife and asking her to burn a candle for him. Even in writing the suicide note, those about to kill themselves seem to avoid the use of the word 'suicide' and references to what they are about to do (Spiegel & Neuringer, 1963). Spiegel and Neuringer speculated that the suicide dreads what he or she is about to do and suppresses thoughts of it.

Acceptance

What about acceptance in the suicidal person? Suicidal people are unusual in this respect as compared to those suffering from life-threatening illness. Suicides choose the method and the time of their death. Thus, clearly they have accepted their death.

It is difficult, however, to document this acceptance in their pre-death behavior. Only one study has appeared on this issue. Keith-Spiegel and Spiegel (1967) examined the hospital records of a sample of patients who committed suicide and found that suicides were described as calm, cheerful, pleasant and optimistic in the twenty-four hours prior to their suicide whereas other patients were described as anxious, despondent, hostile and withdrawn. Perhaps, having made up their mind as to the timing of their death, the pre-suicidal person is calm and at peace with the

decision?

Denial and Acceptance in the Significant Others

Denial

Interestingly, early on in the study of suicides, researchers wondered why suicidal people did not communicate their intent to their relatives and friends. Once it was found that the majority of suicides did communicate their intent (almost seventy percent), researchers began to wonder why their relatives and friends ignored this communication.

There is the common myth in our culture that those who talk about suicide will not do it (Lester & Lester, 1971). Thus, survivors often say that they did not take even overt threats of suicide seriously.

The problem for the relatives of suicides is made more difficult if the potential suicide threatens continually. If you are married to an alcoholic or a chronically depressed person who threatens suicide weekly or even daily, you are likely to ignore such threats eventually. Indeed, the person may be so difficult to live with and so destructive to your own life that you actually begin to wish for his or her death, and Richman (1986) has documented the hostility and even murderous impulses of some family members of suicidal people.

Acceptance

Eventually, the relatives and friends of suicidal people can come to accept their suicide. In the case of Ellen West, Binswanger (1958), the treating psychiatrist, reported that he released Ellen West from his hospital to go home to her family, knowing that she would kill herself. He discussed this with her husband, who therefore also knew the likely outcome. Both Binswanger and Ellen's husband had come to accept her suicide as the best solution for her troubled life. In some cases, the acceptance shows through in ambivalence. Mary Hemingway knew that Ernest might commit suicide, so the night before his death she locked his guns away in the gun cupboard. However, she hung the keys to the cupboard in their usual place so that Ernest was able to take a gun the following morning and kill himself (Meyers, 1985).

More recently, Arthur Koestler and his wife committed suicide (in 1983). Arthur Koestler was dying from leukemia and suffering also from Parkinson's disease. In addition, he had suffered from depression for much of his life. He had been vice-president of the Voluntary Euthanasia Society. His wife Cynthia choose to die with him rather than face life alone (Goldney, 1986). It is clear that Cynthia accepted the suicide of her husband.

Discussion

We have seen that denial and acceptance can be documented in both those who commit suicide and in their relatives. Very little research has been conducted on these states of minds in suicides and their significant others. We have no evidence as to how common these states are and whether people move from denial to acceptance over time. Such questions are for the future.

References

Binswanger, L. (1958). The case of Ellen West. In R. May, E. Angel & H. F. Ellenberger (Eds.) *Existence*. New York: Basic Books.

Goldney, R. D. (1986). Arthur Koestler: Was his suicide rational? *Crisis, 7,* 33-53.

Keith-Spiegel, P., & Spiegel, D. E. (1967). Affective states of patients immediately preceding suicide. *Journal of Psychiatric Research, 5,* 89-93.

Lester, G., & Lester, D. (1971). *Suicide: the gamble with death*. Engelwood Cliffs, NJ: Prentice-Hall.

Meyers, J. (1985). *Hemingway*. New York: Harper & Row.

Richman, J. (1986). Family therapy for suicidal people. New York: Springer.

Robins, E., Gassner, S., Kayes, J., Wilkinson, R. H., & Murphy, G. E. (1959). The communication of suicidal intent. *American Journal of Psychiatry, 115,* 724-733.

Silverman, C. (1968). *The epidemiology of depression*. Baltimore, MD: Johns Hopkins Press.

Spiegel, D. E., & Neuringer, C. (1963). Role of dread in suicidal behavior. *Journal of Abnormal & Social Psychology, 66,* 507-511.

Yessler, P. G., Gibbs, J. J., & Becker, H. A. (1960). On the communication of suicidal ideas. *Archives of General Psychiatry, 3,* 612-631.

#7

ESTATE PLANNING AND SUICIDE

David Lester

No one has yet studied the estate planning of potential suicides. There has been no study of the kinds of wills that they leave, nor even the proportion of suicides who leave wills.

About forty percent of suicides leave suicide notes, and often these notes include instructions and last will-and-testaments. For example:

I specifically request that my body be disposed of by cremation. To my good friends, Joe Smith and Mary Jones I give my deep and undying affection. My dear parents, Henry W. and Betty C Brown have done their best for me and it is my failure, rather than anything they have failed to offer that has brought this about. My sister, Helen White of 100 Main Street, New York, is closest and dearest to me and, with her consent, I ask that she take and raise my son. My phonograph records, now in storage with my parents, I give to my former wife, Wilma Brown, 200 Broadway, Los Angeles, Calif. Explanations would be useless, suffice to say I have tried and failed. Given unto my hand this ninth day of June in the year of 1943, A.D., in the city of Los Angeles, California. (Shneidman & Farberow, 1957, p. 209)

Menninger (1938) has classified the motives for suicide as:

(1) the desire to kill, by which Menninger means that the suicide is angry at others. He or she thinks about revenge and aggressing against those left behind. For example, you can shoot yourself in the head so that your spouse or parent or child has to discover your disfigured body.

(2) the desire to be killed, by which Menninger means that the suicide feels depressed, guilty and worthless and kills himself to atone for his sins and failures.

(3) the desire to die, by which Menninger means the desire to escape from unbearable physical or psychological pain.

These motives affect all aspects of the suicidal act, and they may show up in the will that is written and the manner in which the suicide's estate is disposed of. However, all kinds of motives affect the estate planning of everyone, and suicides probably do not demonstrate motives that cannot be found in the rest of us.

Suicide and Life Insurance

No analysis has been published of life insurance company policies in the USA toward deaths from suicide. However, in Great Britain, Barraclough and Shepherd (1977) found that only 52 of 100 companies had suicide exclusion clauses. 26 of these companies had a one-year time period, 16 had 13 months and 10 had two years. Some companies refunded the premiums in cases of suicide during the critical time period, other returned a proportion, while one refused to refund any of the premiums paid. In a study of 44 spouses of suicides, 20 of the suicides had life insurance and all of the spouses received at least some payment, 13 had no insurance, and in 11 cases there was no information about insurance.

Civil Statutes Pertaining to Suicide

States differ widely in both the criminal and civil statutes pertaining to suicide. The following lists show which states had particular kinds of civil statutes early in the 1980s (from Victoroff, 1983).

Three types of statutes are listed:
(1) Life Insurance: statutes that limit an insurance company's denial of payment on life insurance or double-indemnity policy claims in cases of suicide. States here include Arizona, Colorado, Georgia, Massachusetts, Mississippi, Missouri, New Mexico, New York, North Dakota, Oklahoma, South Dakota, Texas, Utah, Virginia, Washington and West Virginia.
(2) Worker's Compensation: statutes affecting recovery of Worker's Compensation payments in cases of suicide. States here include: Alaska, Florida, Iowa, Massachusetts, Minnesota, Mississippi and West Virginia.
(3) Nonforfeiture of Estates of Suicide Victims: statutes expressly abolishing common laws of escheat or forfeiture of the land and property of suicide victims to the state. States here include: Colorado, Maryland, Minnesota, Missouri, New York, Virginia and West Virginia.

Clues to Suicide

It may be useful to sensitize estate planners about the clues to suicide. Suicide prevention counselors use five sets of information to assess suicide risk.

(1) First, suicide is most common in elderly white males. Females rates are lower, as the rates of blacks in general. The increase in suicide rates with age is still strong despite the recent increase in the suicide rates of young adults (primarily in young adult males).

(2) Suicide is much more likely in those who are psychiatrically disturbed. Suicide rates are highest in psychotics, especially those with affective disorders (formerly called depressive disorders). Alcoholics have high suicide rates too. In general, the more depressed (and hopeless) an individual feels, the higher the suicide risk.

(3) Suicide occurs after severe recent stress. The more recent stress an individual experiences (from events such as loss of a loved one through death or divorce, loss of job or money, illness, etc.), the more likely suicide becomes.

(4) Suicide is more common in those with a history of suicidal attempts and ideation, in those who are currently considering suicide, in those who have a plan for killing themselves and who have the means already available, and in those who plan to use a lethal (quick-killing) method (such as a gun or hanging).

Many people hesitate to ask someone else about these concerns, fearing that asking questions such as "Are you thinking about suicide?" will actually precipitate a suicide. However, it is impossible to assess the risk of a person's suicide accurately without asking these questions.

(5) Finally, the presence of social resources such as friends and families and social

organizations to which the person belongs act against suicide - unless those friends and relatives of the person are hostile and uncaring toward him.

The more these five factors are weighted against the individual, the more likely he or she may commit suicide and the stronger should be our motivation to persuade the individual to seek professional counseling.

References

Barraclough, B., & Shepherd, D. (1977). Suicide and life insurance. *British Medical Journal, 2,* 46.

Menninger, K. (1938). *Man against himself*. New York: Harcourt Brace & World.

Shneidman, E. S., & Farberow, N. L. (1957). *Clues to suicide*. New York: McGraw-Hill.

Victoroff, V. M. (1983). *The suicidal patient*. Oradell, NJ: Medical Economics Books.

#8

THE FUTURE FOR SUICIDE RESEARCH AND PREVENTION

David Lester

As we approach the year 2000, it is tempting to explore what we have learned so far about the causes of suicide and how to prevent it so that we can set goals for the Twenty-First Century. Let us look first at our knowledge about suicide.

Theory and Research into Suicide

Sociological Approaches

Suicide has a legitimacy in sociology because one of the major influences in theoretical and empirical sociology, Emile Durkheim (1897), addressed the issue of suicide. (In contrast, Sigmund Freud mentioned suicide only in passing in his writings.) Durkheim contributed a classification of suicide into four types based upon two underlying concepts (social integration and social regulation). Today, sociologists still analyze his seminal book.

Several powerful theories have developed out of Durkheim's theory. Henry and Short (1954) focused on the strength of external restraints on behavior in a society, while Gibbs and Martin (1964) focused on the degree to which the different statuses of the members of a society are consistent. More recently, Taylor (1982) has proposed a fourfold classification of suicide based on the concepts of whether the suicidal action is inner or outer directed and an ordeal or purposive.

These theories have provided powerful stimuli to the study of the suicide rates of nations and social groups. These suicide rates have proven to be quite stable over time. For example, Lester (1987a) found that the suicide rates of fourteen nations in 1875 and 1975 correlated 0.42.

Despite doubts that official statistics for suicide on which these rates are based might be invalid (Douglas, 1967), the suicide rates of immigrants to the USA or to Australia (where official death registration procedures are uniform) are in the same rank order as the suicide rates of the home nations (Sainsbury and Barraclough, 1968; Lester, 1972). As a result, a great deal of information has been acquired about the suicide rates of nations and groups (Lester, 1983).

Psychological Approaches

In contrast to the situation in sociology, suicide is not one of the traditional topics of study for psychologists. This is the case partly because virtually no psychological theory of personality or behavior has tried to grapple with the problem of suicide. Sigmund Freud, on the whole, ignored the topic, as have most of the major theorists since then (including Carl Jung, Alfred Adler, Carl Rogers, B. F. Skinner, Abraham Maslow, and so on). Recently, Lester (1987b) has proposed a social learning theory of suicide, and he did so partly to bring suicide into the mainstream of psychological thought.

A second reason for the neglect of suicide by psychologists is that psychologists traditionally prefer to study behaviors that can be brought into the laboratory for experimental study where the independent variables can be controlled. It is has not proven possible to produce laboratory analogues of suicidal behavior for study.

Thus, we find that "psychological theories" of suicide do little more than propose a personality trait that might correlate with suicide and rarely approach the complexity and formality of sociological theories.

The problem for psychologists is also compounded by the statistical rarity of suicide. Only about one percent of all deaths are from suicide and only about twelve people out of one hundred thousand living people kill themselves each year. This infrequent occurrence of suicide makes it very hard to adequately explain its occurrence.

A good analogy here is the difference between predicting when half of a number of uranium atoms will decay (easily done) and predicting which particular uranium atom will decay next (virtually impossible). Sociologists are dealing with the statistically regular behavior of groups while psychologists are dealing with the eccentric behavior of individuals.

Finally, for the psychologist, suicide research is hindered by the fact that the individual is dead. Sociologists can simply include each death in the final statistics of the group, but psychologists need a subject to respond to their psychological measuring instruments. One solution to this problem has been the study of substitute subjects (Neuringer, 1962), but most suicidologists have argued that attempted suicides do not resemble completed suicides and can teach us little about the latter. Indeed, in Great Britain, the preference these days is to refer to attempted suicides as self-injurers (or self-poisoners if they use poison) in order to stress this point. (Incidentally, Lester, et al., 1979) have described a methodology for studying attempted suicides in which we can extrapolate from them to completed suicides, but this methodology has not been followed by other researchers.)

There is no reason why attempted suicide should not be an equally legitimate topic for study. Sociologists have, on the whole, avoided the topic of attempted suicide (perhaps because it is difficult to calculate accurate rates of attempted suicide). Psychologists have conducted many psychological studies of attempted suicide, and indeed most of the psychological ideas about suicide come from such studies. However, attempted suicide, like completed suicide, remains ignored by the major psychological theorists, and it too has proven difficult to bring into the laboratory for study.

For the Twenty-First Century, therefore, an effort must be made to relate suicide to the major psychological theories so that suicide research can be grounded in theory and achieve respectability as a topic for study.

Psychiatric Approaches

The recent decade has seen a tremendous growth in physiological research into psychiatric disorders, and this interest is apparent also in suicide research. Several groups of

investigators are involved in studies of brain biochemicals in completed suicides in an effort to discover unique biochemical patterns (Maris, 1987).

Unfortunately, the different research teams typically study only very small samples, and they all too often cannot differentiate between the physiological concomitants of depression and those of suicide.

The task for the Twenty-First Century is for the funding agencies to support a study of the potentially relevant biochemicals involving hundreds, and even thousands, of subjects with adequate controls for the underlying psychiatric disorder (typically depression, though other psychiatric disorders are also associated with an increased risk of suicide).

Suicide Prevention

The initial efforts to prevent suicide were stimulated by Edwin Shneidman and Norman Farberow at the Los Angeles Suicide Prevention Center in the 1950s (Shneidman & Farberow, 1957). The demonstration center there, together with Shneidman's founding of a center for the study of suicide at the National Institute of Mental Health, led to the establishment of suicide prevention and crisis services in cities across America. During the same period, the Samaritans organized suicide prevention centers in towns in Great Britain. Two organizations were formed to stimulate these prevention efforts: the International Association for Suicide Prevention and the American Association of Suicidology.

Though these centers perform a needed service for the members of their communities, there has been little evidence that they prevent suicide (Barraclough, et al., 1977; Lester, 1974), though a recent study has suggested that they may have an impact on the suicide rate of young females (Miller, et al., 1984).

In the last couple of decades there has been an enormous increase in the power of medications to control the symptoms of psychiatric disorder. The development of effective anti-depressants and the use of lithium for some affective psychoses have had a tremendous impact on preventing the underlying psychiatric disturbance that increases the risk of suicide. More recently, the development of effective methods of psychotherapy and, in particular, cognitive therapy (Beck et al, 1985) have also had a beneficial impact on preventing those psychological states that have an increased suicidal risk.

More recently, the effect of the detoxification of domestic gas in Great Britain, with the resultant drop in the British suicide rate by about thirty percent (Clarke and Mayhew, 1987) has led researchers to consider whether restricting the methods available for suicide might prevent suicide, a public health approach (Lester, 1987c). Lester (1984) has demonstrated that the restrictions on guns in the United States appear to reduce the suicide rate (though not the homicide rate). However, a critical question here is whether people will switch methods for suicide if we make their preferred method unavailable. This is a question for research in the Twenty-First Century.

The Classification of Suicides

A problem that continues to confront suicidologists is the classification of suicides into types. Several approaches have been tried. Psychiatric diagnosis is clearly critical, and studies now appear on schizophrenics who kill themselves (e.g., Roy 1982), or on alcoholics, etc. Suicides are also classified on the basis of suicidal life style and precipitant for the suicidal act. This has been useful, for example, in understanding sex differences in suicidal style (Wold, 1971).

Finally, Lester (1987b) has suggested extending the traditional classification into attempted versus completed suicides to distinguish between those who complete suicide having earlier attempted suicide and those who have not previously attempted suicide, and so on. The relative use of these classificatory schemes is at yet untested. But since suicides are clearly not all alike, classificatory schemes are crucial for good research and must be further developed and refined.

Fads in Research

Finally, the existence of fads for research into suicide must be noted and criticized. In the 1960s, suicide in the American Indian was considered an important topic. The 1970s saw media and scholarly attention given to suicide in young blacks. In the 1980s the focus is on teenage suicides.

Interestingly, this focus rarely advances our understanding of the topic. A spate of articles appears on suicide focused on the particular group, most of which lack an empirical focus and any theoretical orientation. The same well-worn advice for suicide prevention is reprinted, this time with an emphasis on the target group. A few years later, the media and the scholars move on to the next 'problem' population, having done little to further our understanding or prevent suicide in the previous target population.

Suicide is a behavior that interests us, both citizens and scholars, and it is unlikely that the media will ever ignore suicidal behavior. But we must not let the media deflect us from the development of sound theory and basic empirical research that will eventually help us understand this puzzling choice for death.

References

Barraclough, B. M., Jennings, C., & Moss, J. R. (1977). Suicide prevention by the Samaritans. *Lancet, i,* 237-239.

Beck, A. T., Hollon, S. D., Young, J. E., Bedrosian, R. C., & Budenz, D. (1985). Treatment of depression with cognitive therapy and amitriptyline. *Archives of General Psychiatry, 42,* 142-148.

Clarke, R. V., & Mayhew, P. (1987). The British gas suicide story and its criminological implications. *Crime & Justice, 11,* in press.

Douglas, J. D. (1967). *The social meanings of suicide*. Princeton, NJ: Princeton University Press.

Durkheim, E. (1897). *Le suicide*. Paris: Felix Alcan.

Gibbs, J. P., & Martin, W. T. (1964). *Status integration and suicide*. Eugene: University of

Oregon Press.
Henry, A. F., & Short, J. F. (1954). *Suicide and homicide*. Glencoe, IL: Free Press.
Lester, D. (1972). Migration and suicide. *Medical Journal of Australia, 1,* 941-942.
Lester, D. (1974). Effect of suicide prevention centers on suicide rates in the United States. *Health Services Reports, 89,* 37-39.
Lester, D. (1984). *Gun control*. Springfield, IL: Charles Thomas.
Lester, D. (1987a). The stability of national suicide rates in Europe: 1975-1975. *Sociology & Social Research, 71,* 208.
Lester, D. (1987b). *Suicide as a learned behavior*. Springfield, IL: Charles Thomas
Lester, D. (1987c). A new public health approach to suicide prevention. Talk presented at the University of Windsor.
Lester, D., Beck, A. T., & Mitchell, B. (1979). Extrapolation from attempted suicide to completed suicide. *Journal of Abnormal Psychology, 88,* 78-80.
Maris, R. (1987). *Biology of suicide*. New York: Guilford.
Miller, H., Coombs, D., Leeper, J., & Barton, S. (1984). An analysis of the effects of suicide prevention facilities on suicide rates in the US. *American Journal of Public Health, 74,* 340-343.
Neuringer, C. (1962). Methodological problems in suicide research. *Journal of Consulting Psychology, 26,* 273-278.
Roy, A. (1982). Suicide in chronic schizophrenics. *British Journal of Psychiatry, 141*, 171-177.
Sainsbury, P., & Barraclough, B. M. (1968). Differences between suicide rates. *Science, 220,* 1252.
Shneidman, E. S., & Farberow, N. L. (1957). *Clues to suicide*. New York: McGraw-Hill.
Taylor, S. (1982). *Durkheim and the study of suicide*. London, UK: Macmillan.
Wold, C. (1971). Subgroupings of suicidal people. *Omega, 2,* 19-29.

#9

BEREAVEMENT AFTER SUICIDE BY FIREARM

David Lester

In 1985 in the United States, there were 30,848 deaths from firearms - 17,363 from suicide, 11,836 from homicide and 1,649 accidental deaths from firearms. Firearms accounted for 59 percent of the suicides and 60 percent of the homicides.

Clarke and Lester (1989) carried out a series of studies which showed that the use of firearms for suicide was affected by the availability of firearms in the society. For example, Lester (1984) found that states in the USA with stricter handgun control laws had lower suicide rates by firearms and lower overall suicide rates. Lester (1988) has shown that a similar, though weaker, phenomenon occurs for homicide.

Do those who use guns for suicide differ from those who use other methods? I have long believed that the choice of method for suicide must be related to the personality of the individual and reflect the psychodynamics of the suicidal act. However, research has failed to confirm this belief.

Research into the suicide notes written by those choosing different methods for suicide has failed to reveal differences (Lester, 1971a, 1971b; Leenaars and Lester, 19888-1989). Furthermore, Lester (1970a, 1970b) found no differences in the MMPI protocols of those using different methods for suicide or in their TAT protocols.

Finding a Firearm Suicide

Menninger (1938) described three major motives found in the decision to commit suicide: the wish to escape from unbearable physical or psychological pain (the wish to die), the desire to punish oneself for real or imagined wrong-doing and to atone for misdeeds (the wish to be killed), and the desire to hurt others (the desire to kill). Those who have to deal with suicides and their survivors, the police for example, often view a firearm suicide is a hostile act, particularly if the surviving family are the ones who discover the body.

A firearm suicide leaves a a bloodied mess for those who discover the body, especially since the majority of firearm suicides shoot themselves in the head. This means that those who discover the body must not only deal with their emotions resulting from the suicide of their family member or friend, but they must also live with the horrible visual memory of the body when they found it.

Susan White-Bowden (1985) has described the consequences of the suicide of her husband. After four years of separations and reconciliations, Susan finally divorced her husband. Her husband, however, refused to accept the finality of the divorce. He still visited his wife and their three children and tried to push for another reconciliation. One day, after Susan had arrived home from work, her ex-husband again tried to persuade her to let him return, telling her that he could not live without her. After dinner, while Susan was taking a bath, he went to their bedroom

and shot himself with a handgun.

Clearly, Susan's ex-husband was angry, and he chose to make her and the children suffer by shooting himself in their house so that they would find him and be forced to confront his mutilated body.

Susan admits that she did not share her feelings with the children or take them into therapy with her after this traumatic experience. She went on with life, trying to pretend that everything was fine. Her son Jody was fourteen when his father shot himself. Four years later, after his girl-friend had broken-up with him, Jody went home and shot himself with a rifle in his bedroom. Susan's ex-husband never knew, therefore, the full consequences of his revenge.

Such examples are not hard to find. Leicester Hemingway, the brother of Ernest Hemingway (also a suicide), was home one day with influenza at the age of thirteen when his father came home and shot himself. Leicester discovered the body. Many years later in his sixties, when he was suffering from diabetes and the threat of amputation of his legs, Leicester borrowed a friend's handgun and shot himself (Lester, 1987).

Discussion

Dying by suicide with a firearm may, therefore, be a way of expressing anger toward those close to you. The suicide hopes that the survivors will have their suffering increased by discovering the body. This then compounds the problems facing the bereaved survivors. Not only must they deal with the emotions of grief, sadness, guilt and anger after the suicide, but they must also deal with the horror experienced when they discovered the body. As a consequence, counselors working with those bereaved in this way should be prepared for a more prolonged and difficult therapeutic process.

References

Clarke, R. V., & Lester, D. (1989). *Suicide: closing the exits*. New York: Springer-Verlag.

Leenaars, A. A., & Lester, D. (1988-1989). The significance of the method chosen for suicide in understanding the psychodynamics of the suicidal individual. *Omega, 19,* 311-314.

Lester, D. (1970a). Factors affecting choice of method for suicide. *Journal of Clinical Psychology, 26,* 437.

Lester, D. (1970b). Personality correlates associated with choice of method for suicide. *Personality, 1,* 261-264.

Lester, D. (1971a). Need for affiliation in suicide notes. *Perceptual & Motor Skills, 33,* 550.

Lester, D. (1971b). Choice of method for suicide and personality. *Omega, 2,* 76-80.

Lester, D. (1984). *Gun control*. Springfield, I: Charles Thomas.

Lester, D. (1987). Living in the shadow. In R. I. Yufit (Ed.) *Proceedings of the 20th Annual Conference of the American Association of Suicidology*, pp. 432-433. Denver, CO: AAS.

Lester, D. (1988). Firearm availability and the incidence of suicide and homicide. *Acta Psychiatrica Belgica, 88,* 387-393.

Menninger, K. (1938). *Man against himself*. New York: Harcourt, Brace & World.

White-Bowden, S. (1985). *Everything to live for*. New York: Poseidon.

#10

THE ROLE OF GUNS IN SUICIDE AND VIOLENT DEATH

David Lester

It is obvious that guns play a major role in producing violent death in our society. In 1986 in the USA, there were 18,160 suicides by gun (59 percent of the total), 13045 homicides by gun (61 percent of the total), and 1452 accidents by gun. In addition, many thousands of individuals are injured by guns.

One technique for preventing suicide (and perhaps homicide and accidental deaths) which has been explored in recent years is the restriction of easily available means for suicide (Clarke and Lester, 1989). If the means for suicide were less available, then suicidal persons would be less able to make lethal impulsive suicide attempts. This chapter reviews the research which I and my colleagues have conducted to explore the usefulness of this strategy.

The Effect of Strict Handgun Control Laws

Bakal (1968) examined the handgun control laws of each American state and coded them for the presence of various characteristics, such as whether a license is required to sell handguns at retail stores, whether sales are reported to the police, and whether a permit is required to purchase a handgun.

Lester and Murrell (1980) created a Guttman scale of strictness for the 48 continental states of the USA from these codings and found that states with the strictest handgun control laws had the lowest firearm suicide rates and the lowest overall suicide rates both in 1960 and 1970. Those states with the stricter handgun control laws and the lower firearm suicide rates did not have higher suicide rates by poisons or hanging/strangulation, though the suicide rate by "other" methods was higher. Thus, Lester and Murrell concluded that switching to an alternative method for suicide did not occur to any great extent in states in which the handgun control laws were stricter.

Further analysis of the data (Lester, 1984) showed that the restrictions on the selling and purchasing of handguns were the most critical characteristics of the laws in the association with lower firearm suicide rates. Restrictions on carrying were unrelated to firearm suicide rates. Finally, controls for social variables (such as percent of blacks and percent of males in each state) did not eliminate these associations.

Lester (1987a) examined the power of the strictness of handgun control laws and the moral attitude toward suicide as predictors in explaining the suicide rates of the continental states. The strictness of the handgun control laws and the percentage of citizens attending church (the operational measure of moral attitudes toward suicide) were both highly correlated with the states' suicide rates, giving a multiple correlation of 0.68, thereby accounting for 46 percent of the variation in the states' suicide rates.

Attempting to Measure the Extent of Firearm Ownership

There are no measures of firearm ownership for each state of the USA. However, several indirect measures are available such as the accidental death rate from guns since, presumably, the more guns in a region the more accidental deaths that will occur as a result of these guns. Lester (1987b, 1989b) examined the relationship between the accidental death rate from firearms in each state and the percent of homicides committed using firearms with the suicide rate. The accidental death rate using firearms was positively associated with the firearm suicide rate, but not with the overall suicide rate. Similar associations were found for the percent of homicides committed with firearms. (The strictness of the handgun control laws was negatively associated with with overall suicide rate.) Lester and Agarwal (1989) found an association between suicidal and accidental death rates from firearms over the regions of India.

Lester (1990a) has shown that the percentage of homicides committed in each of a sample of nations of the world was positively associated with the nations' suicide rates using guns and negatively with the suicide rate by all other methods.

Lester (1989a) has also explored the use of per capita subscriptions to three firearm magazines in the states of the USA as measures of firearm ownership. Per capita subscription rates to the three magazines were positively correlated to the firearm suicide rate and to the overall suicide rate.

For 1970, Lester (1988c) compared all of these indirect measures of firearm ownership using the states of the USA. The firearm suicide rate was significantly associated with the percentage of suicides using firearms, the percentage of homicides using firearms, the accidental death rate from firearms, handgun control law strictness, and subscriptions to *Shooting Times* and *Guns & Ammo*. The suicide rate from all other methods gave correlations indicative of switching for the percentage of suicides by firearms, the percentage of homicides by firearms, the accidental death rate from firearms, and for subscriptions to *Shooting Times*, but not for the strictness of handgun control laws or subscriptions to *Guns & Ammo*.

Actual Firearm Ownership

Measures of actual firearm ownership are available for the nine major regions of the continental USA (but not for the 48 individual states). Lester (1988a) found that this measure was positively associated with the firearm suicide rate, but not with the overall suicide rate. Lester (1988b) compared these results for the USA with results from an analysis of data from Australian states. In Australia too the per capita ownership of firearms in the states was positively related to the firearm suicide rate but not to the overall suicide rate.

A Time-Series Analysis of Firearm Ownership in the USA

The previous studies were regional studies over the states and major regions of the USA and Australia. Clarke and Jones (1989) obtained data on the household ownership of firearms in the USA as a whole from 1959 to 1984 using data from national polls. Their time-series analysis indicated that the ownership of handguns was associated with the firearm suicide rate and with the overall suicide rate. Yang and Lester (1989) found, however, that changes in the estimate of

handgun ownership from year to year were not associated in these data with changes in the firearm suicide rate.

Homicide

Many of the studies conducted above also examined the effect of gun availability on homicide. Lester (1991) reviewed the results of the research and found more inconsistency than for the research on suicide reviewed above. The indirect measures of gun availability such as the strictness of gun control laws and magazine subscriptions provided no support for an effect of gun availability on homicide rates. However, the use of the other measures (the accidental death rate from guns and the percentage of suicides using guns) did produce results which supported the conclusion that, the more firearms available in a state, the higher the homicide rate by firearms (while giving no association with homicide rates using all other methods).

Accidental Deaths

Lester and Murrell (1981) found that states with stricter gun control laws did have lower accidental death rates from guns and, in a time-series study of the USA, Lester and Clarke (1991) found that the accidental death rate from guns was higher in years when more people owned shotguns. Thus, whereas handguns seem to play an important role in suicidal and homicidal deaths, it appears that long guns play a more important role in accidental deaths.

Conclusions and Recommendations

The present chapter has reviewed a series of regional and time series studies on the effects on suicide rates, homicide rates and accidental deaths rates of reducing the availability of firearms. Though the studies do not lead to a definitive conclusion, the results do indicate that reducing the availability of firearms may reduce their use in violent death and may have an impact on violent death overall since people may not switch to alternative methods for suicide or homicide if guns are less available. It is likely that more research on this important topic will appear in the next few years, hopefully permitting us to evaluate this strategy for preventing violent death more precisely.

The implication of this research is that stricter gun control might prevent many gun deaths in the USA. At the present time, even strict gun control laws are relatively weak. Requiring a seven-day waiting period so that a police check of the buyer's criminal record can be made, for example-, does not prevent individuals from acquiring guns; it merely slows the process of acquisition. Furthermore, as long as states have differing laws, a person can usually cross state lines to acquire a gun more quickly. Thus, concern with deaths from firearms should motivate us to push for federal gun control laws which would apply to all states and for much more stringent requirements for the purchase and ownership of guns than the nation present has.

References

Bakal, C. (1968). No right to bear arms. New York: Paperback Library.
Clarke, R. V., & Jones, P. R. (1989). Suicide and the increased availability of handguns. *Social*

Science & Medicine, 28, 805-809.
Clarke, R. V., & Lester, D. (1989*). Suicide: closing the exits*. New York: Springer-Verlag.
Lester, D. (1984). Gun control. Springfield, IL: Charles Thomas.
Lester, D. (1987a). An availability-acceptability theory of suicide. *Activitas Nervosa Superior, 19,* 164-166.
Lester, D. (1987b). Availability of guns and the likelihood of suicide. *Sociology & Social Research, 71,* 287-288.
Lester, D. (1988a). Gun control, gun ownership and suicide prevention. *Suicide & Life-Threatening Behavior 18,* 176-180.
Lester, D. (1988b). Restricting the availability of guns as a strategy for suicide prevention. *Biology & Society, 5,* 127-129.
Lester, D. (1988c). Firearm availability and the incidence of suicide and homicide. *Acta Psychiatrica Belgica, 88, 3*87-393.
Lester, D. (1989a). Gun ownership and suicide in the United States. *Psychological Medicine, 19,* 519-521.
Lester, D. (1989b). Specific agents of accidental and suicidal death. *Sociology & Social Research, 73,* 182-184.
Lester, D. (1990a). The availability of firearms and the use of firearms for suicide. *Acta Psychiatrica Scandinavica, 81,* 146-147.
Lester, D. (1991). Is the availability of firearms associated with the homicide rate? Submitted for publication.
Lester, D., & Agarwal, K. S. (1989). Accidental death rates as a measure of the availability of a method for suicide. *Perceptual & Motor Skills, 68,* 66.
Lester, D., & Clarke, R. V. (1991). On 'Suicide and increased availability of handguns in the United States.' *Social Science & Medicine,* in press.
Lester, D., & Murrell, M. E. (1980). The influence of gun control laws on suicidal behavior. *American Journal of Psychiatry, 137,* 121-122.
Lester, D., & Murrell, M. E. (1981). The influence of gun control laws on the incidence of accidents with guns. *Accident Analysis & Prevention, 13,* 357-359.
Yang, B., & Lester, D. (1989). Suicide rates and handgun ownership in the United States 1959-1984. *Social Science & Medicine, 29,* 1143.

#11

HOPELESSNESS AND SUICIDE

David Lester

It has long been recognized that one of the major psychiatric syndromes associated with suicide is depressive disorder. Indeed, not only is this disorder associated with suicidal behavior, but so is the symptom of depression and the mood of depression (Lester, 1983). Depression, however, is a multifaceted state. A look at a commonly used objective self-rating depression inventory such as the Beck Depression Inventory (Beck, et al., 1961) reveals questions on mood, thoughts, and behavior (such as eating and sleeping).

Aaron Beck, working within the framework of cognitive therapy, believed that the cognitive component of depression, and in particular a pessimistic outlook on the future, was the critical element that increased the risk of suicide. Accordingly, he devised a self-report inventory to measure this state (Beck, et al., 1974).

In a series of research studies, Beck and his colleagues found that suicidal preoccupation was more strongly associated with scores on the hopelessness scale than scores on the broader depression scale. For example, Lester, et al. (1975, 1979) found that suicide attempters who had more serious suicidal intent scored higher on the hopelessness scale and that those who subsequently killed themselves were among the highest scorers at the time of their initial suicide attempt. Others have replicated these results, finding hopelessness is a predictor of suicidal preoccupation (for example, Wetzel, 1976). Gutierrez, et al. (1988) found that psychiatric patients who killed themselves showed an increase in hopelessness in the two weeks prior to their suicide, but no change in their level of depression.

Helping the Suicidal Client

The recognition that hopelessness, a cognitive component of depression, is strongly associated with suicide suggests that cognitive therapy might be a powerful strategy for helping the suicidal client. Hopelessness is a cognitive distortion for it contains the assumption than the unpleasant conditions experienced at present will continue indefinitely into the future, an illustration of the cognitive distortion of overgeneralization (Burns, 1980).

Cognitive therapy seeks to identify the cognitive distortions of the client (or the irrational thinking) and to challenge these distortions. The client is led to see that his/her unpleasant mood and self-defeating behavior is a result, not of the events which have occurred in recent months, but as a result of the way in which he/she has thought about these events. "Because I am unhappy now, I will <u>never</u> be happy" is that kind of overgeneralization which leads to depression and, in the extreme, suicide (Lester, 1991).

The two major proponents of cognitive therapy have been Albert Ellis (1973) and Aaron Beck (1976), and both have claimed great success in working with depressed and suicidal clients.

Conclusions

We have seen in this chapter that suicidal preoccupation is associated strongly with a cognitive component of depression which Aaron Beck has labelled hopelessness. Cognitive therapy, a strategy which actively challenges the cognitive distortions which lead to hopelessness, has been found to help suicidal clients through their suicidal crises and their depressive episodes.

References

Beck, A. T. (1976). Cognitive therapy and the emotional disorders. New York: International Universities Press.

Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry, 4,* 561-571.

Beck, A. T., Weissman, A., Lester, D., & Trexler, L. (1974). The measurement of pessimism. *Journal of Consulting & Clinical Psychology, 42,* 861-865.

Burns, D. (1980). *Feeling good*. New York: Morrow.

Ellis, A. (1973). *Humanistic psychotherapy*. New York: Julian.

Gutierrez, H. O., Russakoff, L. M., & Oldham, J. M. (1988). The prediction of suicide. In D. Lester (Ed.) *Suicide '88,* pp. 127-128. Denver, CO: American Association of Suicidology.

Lester, D. (1983). *Why people kill themselves*. Springfield, IL: Charles Thomas.

Lester, D. (1991). *Psychotherapy for the suicidal client.* Springfield, IL: Charles Thomas.

Lester, D., Beck, A. T., & Mitchell, B. (1979). Extrapolation from attempted suicides to completed suicides. *Journal of Abnormal Psychology, 88,* 78-80.

Lester, D., Beck, A. T., & Trexler, L. (1975). Extrapolation from attempted suicides to completed suicides. *Journal of Abnormal Psychology, 84,* 563-566.

Wetzel, R. (1976). Hopelessness, depression and suicidal intent. *Archives of General Psychiatry, 33, 1*069-1073.

#12

SUICIDE AND LIFE INSURANCE

David Lester

It is a commonly held belief that if you commit suicide, the insurance company will not pay the benefits due on your life insurance policy. Indeed, Barraclough and Shepherd (1977) noted in Great Britain that the policies of different insurance companies differ from one another, but that sometimes the survivors of a suicide received little or nothing from the companies.

This is not the case in the 1980s in the USA. The standard suicide clause adopted by American insurance companies is "Death from suicide within two years from the date of issue, whether the insured is sane or insane, shall limit the liability of the company to the return of the amount of premiums paid."

Thus, insurance companies always refund the premiums paid and, after two years, will pay the full amount due. Some states narrow the suicide penalty still further. Colorado and North Dakota set the time period as one year. New York requires the phrase "whether the insured is sane or insane" removed. Missouri requires proof of intent to commit suicide at the time of insuring, not easy for the insurance companies to provide.

I surveyed ten very large and ten very small insurance companies personally to see what their policies were regarding suicides. All used the two-year period, except for one large company which used a one-year period.

One large company noted to me that case law presumes *against* suicide, which makes it necessary for the insurance company to have irrefutable evidence for suicide, such as a suicide note. Notes, however, are left by only about forty percent of suicides. Thus, insurance companies pay cases which are suicides but which the company cannot contest. This company also noted the problem posed for them by suicide using automobiles and some other methods which simulate accidents but which are really suicides.

All of the companies surveyed refunded the premiums paid, and some paid interest on these premiums.

Reference

Barraclough, B. M., & Shepherd, D. (1977). Suicide and life insurance. *British Medical Journal, 2,* 46.