Suicides in Los Angeles and Vienna

An Intercultural Study of Two Cities

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SUICIDE has been with us as long as humanity (*1*), and yet our understanding of this complex phenomenon is fragmentary. Its roots are both intrapsychic and environmental, with social aspects relating both to the wider cultural setting as well as to the private sphere with its unique web of family, work, and interpersonal relationships. While Durkheim's classic "Le Suicide" (*2*) laid its major stress on the generalized societal factors, modern researchers have, on the whole, tended to turn their attention to the variables that stem from the suicidal individual's personality and his nuclear social setting.

Comparative studies of suicide in more than one culture are few (*3*, *4*), and the conclusions are tentative rather than definitive. Clearly more research is needed to help distinguish between the intrapersonal, the interpersonal, and the societal causes of suicide so that the appropriate remedies may be applied. It has, for example, been found that in the U.S. context the modal suicide will be a white, Protestant man, 45–55 years of age, who has recently suffered the loss of a loved one or whose health has deteriorated to the point where he can no longer work effectively (*5*). Would this finding also hold in other Western industrial cultures or in less developed cultures?

This study compares data gathered by identical methods on suicides in two different national settings. The subjects of the study were from Vienna, Austria, and Los Angeles, Calif. Suicide rates in the two cities are roughly comparable, namely 17 per 100,000 population in Vienna (1966 police records) and 18 in Los Angeles (1967 coroner's statistics). There is no need to dwell in this report on the flaws in suicide statistics; however, both localities undoubtedly have high suicide rates and have had them for many decades. This report is the first of a series planned from the extensive data obtained about suicides in the two cities.

Procedures

The data from both localities were obtained by the "psychological autopsy" method, a technique first employed by Farberow and Shneidman (*6*). An "autopsy" goes beyond the usual data supplied by police records and coroners' reports; intensive interviews are conducted with family, relatives, and significant friends of the deceased to uncover as much as possible about the dynamics that led to the final lethal step.

Each national group in this study consisted of all the suicides that became known through public records in either city over periods of

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time. The period in Vienna was October 1, 1965 to April 29, 1966, and in Los Angeles from January 1 to May 16, 1967. The Viennese cases were gathered consecutively, while the Los Angeles cases were collected in two periods, approximately half in January and half in May. (Case collection was interrupted when the time interval between the death and interview began to exceed 1 month.) The Los Angeles case data were gathered within a shorter timespan than the Vienna data because Los Angeles County is a "catchment area" of approximately 7 million people (about 1,100 suicides occur there each year).

The interviews in Vienna were conducted by social workers for Lebensmuedenfuersorge, the Vienna Suicide Prevention Service, a department of Caritas, the Catholic Welfare Service Organization. Prof. Erwin Ringel, Vienna Neuropsychiatric Clinic, is director of the service. Interviewers were Christine Binder, Anne Marie Richter, and Maria Pointner.

The Los Angeles interviewers—Mary Jorgensen, Kjell Rudestam, Timothy Brown, Elaine Fielder, and Alexis Nehemkis, under the direction of David Reynolds—were research assistants at the Suicide Prevention Center and the Central Research Unit, Veterans' Administration Center, Los Angeles.

For each suicide, a member of the investigating teams contacted a survivor and enlisted his cooperation for an interview that lasted an average of 2 hours. If the contact refused to be interviewed or if no contact could be found, the case was recorded as an "incomplete data case." In Vienna, attempts to investigate 149 cases were necessary in order to accumulate the desired 50 "complete data cases." In Los Angeles, attempts to investigate 94 cases were necessary before reaching the goal of 50 complete data cases. In an extensive investigation of suicides in Vienna in 1961, Ringel had to examine 382 cases to obtain full data on 50 (7).

The reasons why complete interviews could not be obtained in this study were noted. The number of refusals was about the same in both localities (24 Viennese, 20 Los Angelinos), but in Vienna many fewer contacts with close knowledge of the deceased could be found. No contact was located in 21 suicides in Vienna and in 15 in Los Angeles. Cooperative but uninformed contacts were found in 41 cases in Vienna and in three Los Angeles cases.

A partial reason may be that in Los Angeles the initial contact with survivors was always by telephone and an interview arranged then. In Vienna few people have a telephone, and interviewers had to take their chances and make unannounced home visits, usually during the evening. When no one could be found, the interviewer returned at least twice and left messages in the mailbox before abandoning attempts to find an informed contact. Even allowing for this factor, there is evidence that those committing suicide in Vienna simply had fewer close contacts. Also, in Vienna six contacts denied that the deaths were suicides; no Los Angeles contacts made such denials.

The amount of information about the incomplete cases varies from the barest identification data obtained from Vienna police records and the Los Angeles coroner's office to fairly detailed histories—if of dubious validity—supplied by neighbors, janitors, or even the mailman. For the complete data groups most informants in both cities were women, 82 percent in Vienna and 64 percent in Los Angeles. That most informants were women is a logical consequence; men committed 80 percent of the complete data suicides in Vienna and 54 percent of the suicides in Los Angeles. The median age of informants in Vienna was 50 years, with 38 percent age 44 or less, 50 percent age 45–64, and 12 percent age 65 or older. For Los Angeles, the median age of informants was 45, with 50 percent age 44 or less, 34 percent 45–65, and 16 percent age 65 or older. Approximately half the informants in each city were spouses (58 percent Vienna, 48 percent Los Angeles); 24 percent of the Viennese informants were children, parents, or siblings compared with 38 percent of the Los Angeles informants. The rest, 18 percent in Vienna and 14 percent in Los Angeles, were in-laws, fiancé(e)s, or very close friends. In both groups about 72 percent of the informants knew the decedents 10 years or more.

Some of the hard data from the incomplete records could be meaningfully pooled with data from the complete cases, thus providing us with a larger sample for some variables. Subsequently in the text, "total sample" refers to pooled data from both complete and incomplete

records; "complete data cases" refers to the group for whom complete interviews were possible. The interview was semi-structured; that is, questions concerned each of the following topics, but the interviewer was not limited in order and format in conducting the interview.

Identifying information about the deceased
Details of suicide act
Communication about suicidal intent
Reactions to presuicide communication
Previous suicide attempts and motivation
Syndromes
Lethal intent
Personal and background information (medical, psychiatric, marital, social, occupational and financial, residential, and developmental)

The first seven categories relate, in the main, to the act itself and the situation immediately leading up to it; the personal and background information refers to the deceased's personality, interpersonal situation, and history. The same amount of information could not always be obtained for all subjects. However, apart from the individual differences, some noticeable national characteristics in type and amount of information obtained for different items emerged. These characteristics are discussed subsequently.

Information from the protocols was coded and tabulated according to a special coding procedure, designed with the assistance of the Western Research Support Center, Veterans' Administration Hospital, Sepulveda, Calif.

The coding procedure allowed the more than 500 variables to be analyzed by computer. Approximately 75 percent of the variables were factual (age, sex, number of previous attempts, and so forth), but for the remaining 25 percent, the coder was required to make a judgment about the respondents' statements. Reliability of coding was tested by selecting five cases at random from the 50 complete data cases and having another interviewer code them. Agreement on factual items ranged from 91 to 94 percent; on the judgmental items, from 82 to 92 percent.

Results

Unless specifically noted, results are based on the complete data records for 50 cases from each city. Some information is missing for some subjects, and consequently the findings related to the smaller numbers are indicated on the pertinent tables. Unless otherwise noted, all statistical comparisons in the "Results" section were computed by the chi-square test.

Identity Information About the Deceased

In both total samples, slightly more men than women killed themselves. In Vienna 55 percent of the decedents were men, and in Los Angeles, 53 percent. The differences by sex were not significant. A significant difference in sex composition did emerge when complete and incomplete cases were considered separately.

In Vienna there were four complete records for men for each complete record for a woman; whereas the 57 women outnumbered the 42 men among the incomplete cases (table 1). In Los Angeles, by contrast, the proportion of men to women was about the same for both complete and incomplete cases—23 men, 21 women in the incomplete cases and 27 men, 23 women in the complete cases. Possible reasons for these findings are considered in the discussion.

Table 1. Total sample and complete and incomplete data cases, by sex of decedent, Vienna and Los Angeles

Cases	Vienna						Los Angeles					
	Male		Female		Total		Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Incomplete	42	28	57	38	99	66	23	24	21	22	44	47
Complete	40	27	10	7	50	34	27	29	23	24	50	53
Total	82	55	67	45	149	100	50	53	44	46	94	100

The mean age for the total sample of those committing suicide in Vienna was 53 years and for Los Angeles it was 48 years (table 2). The difference was not significant. The mean age of men was 50 in Vienna and 45 in Los Angeles, and for the women, it was 56 in Vienna and 51 in Los Angeles. None of the differences between mean ages for sexes between or within cities was significant. Likewise, none of the differences between or within cities for mean age or age by sex comparisons for the incomplete data cases was significant.

When the mean ages of the complete data cases were compared, the Vienna group tended to be older than the Los Angeles group (52 and 46 years, $P < 0.05$) and for the men (52 and 42 years, $P < 0.05$). The differences between the women were not significant, either between or within cities.

The marital status for the complete cases does not differ significantly between Viennese and Los Angeles decedents. In Vienna, 56 percent were married, 14 percent were single, 18 percent separated or divorced, and 12 percent widowed. In Los Angeles, 46 percent were married, 12 percent single, 22 percent separated or divorced, and 20 percent widowed.

Details of the Suicide Act

In the total sample no suicides occurred significantly more often on any one day in either city. Although it seems curious in this sample that most suicides in Vienna (37 percent) and fewest suicides in Los Angeles (21 percent) occurred on Friday and Saturday, the difference is still nonsignificant.

For both the total sample and complete data groups, there were two significant differences in the method of suicide. In Vienna, 38 percent of the total sample used domestic gas; none of the Los Angeles suicides died using gas, since the gas in that city is nonlethal ($P < 0.01$; table 3). Guns were used in 39 percent of all Los Angeles suicides, but in only 4 percent of those in Vienna ($P < 0.01$). The differences between the two cities in use of any of the other methods are insignificant. No Viennese killed himself using motor exhaust gas. In Los Angeles, a city infamous for its high ratio of cars per population, 6 percent of the total group used this method. No significant differences occurred between methods for the total sample and methods for the complete data groups.

Where did subject die? Was he likely to be seen at the place of suicide? Who found the

Table 2. Age and sex of decedents, total sample and incomplete and complete data cases, Vienna and Los Angeles

Group	Vienna						Los Angeles					
	Male		Female		Total		Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total sample, age in years	82	54	67	45	149	100	50	53	44	47	94	100
39 or under	26	17	11	7	37	25	18	19	10	11	28	30
40–59	23	15	31	21	55	37	19	20	22	23	41	44
60 or more	33	22	25	17	57	38	13	14	12	13	25	26
Incomplete data cases, age in years	42	42	57	57	99	99	23	52	21	48	44	100
39 or under	15	15	10	10	25	25	5	11	2	5	7	16
40–59	15	15	24	24	39	39	11	25	14	32	25	57
60 or more	12	12	23	23	35	35	7	16	5	11	12	27
Complete data cases, age in years	40	80	10	20	50	100	27	54	23	46	50	100
39 or under	11	22	1	2	12	24	13	26	8	16	21	42
40–59	8	16	7	14	15	30	8	16	8	16	16	32
60 or more	21	42	2	4	23	46	6	12	7	14	13	26
Mean age, in years:												
Total sample	50	------	56	------	53	------	45	------	51	------	48	------
Incomplete data cases	49	------	56	------	53	------	49	------	53	------	51	------
Complete data cases	52	------	52	------	52	------	42	------	50	------	46	------

Table 3. Methods of suicide, total sample and complete data cases, Vienna and Los Angeles

Method	Vienna				Los Angeles			
	Total sample		Complete data group		Total sample		Complete data group	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Barbiturates, drugs, poison	31	21	7	14	30	32	17	34
Domestic gas	57	38	14	28	0	----	0	----
Auto exhaust, carbon monoxide	0	----	0	----	6	6	2	4
Hanging	37	25	16	32	15	16	9	18
Jumping	16	11	7	14	4	4	0	0
Shooting	6	4	4	8	37	39	21	42
Drowning	1	1	1	2	1	1	1	2
Stabbing or cutting	1	1	1	2	1	1	0	----
Total	149	101	50	100	94	99	50	100

body? Was there indication that the suicide was planned? These questions were posed to determine the chances of rescue. No significant differences were found between Vienna and Los Angeles in the answers to the first three questions for the complete data groups. However, 54 percent of respondents in Vienna denied the act was planned, while 93 percent of the Los Angeles contacts felt there had been some planning ($P < 0.05$, table 4).

Approximately the same number of subjects in both samples (41 percent in Vienna and 32 percent in Los Angeles) were reported to have been drinking at the time of the act (table 4).

Communication About Suicidal Intention

As findings from systematic suicide research accumulate, it has become increasingly apparent that many, if not most, persons who become suicidal give ample warning of their intentions and, in a sense, plead to be rescued. To what extent have these forewarnings been apprehended, heeded, and responded to in our samples?

Did the subject leave a suicide note? Had he been writing regularly to anyone? Both these questions seek the extent of communication between the person and society preceding the act. Respondents' answers to both questions indicated that the Los Angeles subjects had significantly greater communication. Forty-six percent of them left suicide notes; only 18 percent of the Viennese did so ($P < 0.01$). Thirty percent of the Angelinos, compared with 9 percent of the Viennese, had been writing regularly to someone ($P < 0.05$, table 5).

To the straightforward question whether the subject had talked about killing himself on last contact, nearly all the respondents replied no or evaded the answer. Only four of 43 Viennese and two out of 48 Angelinos said yes (table 5). When the question was framed more subtly by asking whether the deceased had behaved in an unusual manner at the last contact, that is, did he communicate nonverbally, 32 percent of the Angelinos and 12 percent of the Viennese remembered he had ($P<0.05$).

To whom had the subject talked about his intention to commit suicide? Answers to this ques-

Table 4. Details of suicide act and subject's behavior, complete data cases, Vienna and Los Angeles

Item	Vienna		Los Angeles	
	Number	Percent	Number	Percent
Place of death	50	100	50	100
Home	38	76	33	66
Other	12	24	17	34
Likelihood of being seen	42	100	47	100
Yes	16	38	22	46
No	26	62	25	54
Body found by	50	100	50	100
Informant	26	52	21	42
Other	24	48	29	58
Planning the act	39	100	46	100
Some	18	46	43	93
None	21	54	3	7
Drinking at time	44	100	49	100
Yes	18	41	16	32
No	26	59	23	68

tion were categorized as "significant others," a heading that combined spouse, relatives, fiancé(e), lover, and friends or as "to no one or don't know." Communication between subjects and significant others on the impending suicide was markedly higher in Los Angeles than in Vienna (72 percent compared with 27 percent, $P<0.01$, table 5).

Did the subject act as if he would not be around any longer? Although the deceased didn't seem to talk about killing himself, more Los Angelinos seemed to act as if they wouldn't be around long (by taking out insurance, writing a will, putting their affairs in order, giving away personal belongings). The percentages were 25 in Los Angeles, 2 in Vienna ($P<0.01$, table 5).

The respondents were asked what problems the subject spoke about. Most often the problems were physical health (about 35 percent), feeling unwanted (about 32 percent) and interpersonal difficulties (about 17 percent). Differences were not significant between the samples.

Table 5. Decedents written, verbal, and behavioral communications, complete data cases, Vienna and Los Angeles

Communication	Vienna		Los Angeles	
	Number	Percent	Number	Percent
Suicide note?	50	100	50	100
Yes	9	18	23	46
No	41	82	27	54
Writing regularly?	44	100	46	100
Yes	4	9	14	30
No	40	91	32	70
Mention suicide at last contact?	43	100	48	100
Yes	4	9	2	4
No	39	91	46	96
Behavior unusual last contact?	43	100	50	100
Yes	5	12	16	32
No	38	88	34	68
Talked of suicidal intent	46	100	47	100
To significant other	17	27	34	72
To no one or don't know	29	63	13	28
Acted like would not be around	46	100	49	100
Yes	1	2	12	25
No	45	98	37	75
Response to communication	50	100	50	100
Ignored	28	56	17	34
Argued	17	34	15	30
Tried to help	5	10	15	30
Ridiculed	0	---	3	6

Table 6. Previous attempts, attributed causes of present suicide, and lethality of intent, complete data cases, Vienna and Los Angeles

Question	Vienna		Los Angeles	
	Number	Percent	Number	Percent
Number of previous suicide attempts	49	99	48	100
3 or more	1	2	6	13
2	2	4	3	6
1	9	18	15	31
0	35	71	24	50
No information	2	4	0	---
Causes of suicide death	38	100	42	100
Financial troubles	1	3	1	2
Interpersonal difficulties	6	16	15	36
Mental illness	8	21	5	12
Physical illness	15	39	8	19
Other	8	21	13	31
Did subject intend to die?	50	100	50	100
Yes	34	68	36	72
No	8	16	11	22
Don't know	8	16	3	6

How did significant others react? Communications were more often ignored in Vienna, 56 percent compared with 34 percent in Los Angeles ($P<0.05$). Help seemed more frequently extended in Los Angeles (30 percent versus 10 percent, $P<0.05$, table 5).

Past Attempts, Motive for the Suicide

More previous attempts were reported for the Los Angeles group than the Viennese (50 percent versus 29 percent, $P<0.05$). Three or more previous attempts were reported for six persons from Los Angeles and one person from Vienna (table 6). Either would-be suicides in Vienna succeed more often on their first attempt or prior attempts are more often denied.

Respondents' reasons for the deceased taking his life are likely to be surface ones, but are interesting as indications of "acceptability" within each culture. The Viennese ascribed the cause most often to physical illness (39 percent) while the Los Angelinos most often thought of interpersonal difficulties (36 percent, $P<0.05$).

Many attempts are not meant to end in death. The act is a plea for help, a gesture, an effort to

manipulate the environment, rather than an act to terminate life (*6*, *8*). How many subjects seemed to have a high degree of lethal intent in their actions? While generally difficult to evaluate from our respondents' information, one measure used was the response to the question posed directly to the informant. These responses showed that about two-thirds of the suicidal acts in both groups seemed intended to be lethal (table 6). There were no significant differences between the groups.

Syndromes

Continuing research at the Los Angeles Suicide Prevention Center and Veterans' Administration Central Research Unit has indicated that certain types of personality and certain environmental constellations seem to appear often in suicidal events. Some of these "syndromes" have been described in connection with children by Schrut (*9*), adolescents by Peck (*10*), middle-aged men by Pretzel (*11*), "discarded women" by Wold (*12*), and object-loss by Farberow and McEvoy (*13*). We devised a tentative classification of the patients into several syndromal types drawn principally from behavorial aspects and descriptively categorized. The taxonomy was applied to all complete data cases and to the incomplete data cases with enough information to allow classification, bringing the total number for Vienna to 114 (64 men and 50 women) and to 82 for Los Angeles (42 men and 40 women).

1. Down-and-out or alcoholic subjects were so classified if they had a history of downward social and occupational mobility or a major alcohol or addiction problem, or both. They were socially isolated except for drinking companions and had reached "the end of the rope." In both samples men greatly outnumbered women (table 7), but the difference between cities was not significant for either sex.

2. The typical person with the middle-aged depression syndrome is over 40 years of age and has had a stable work and marital history. A crisis, such as a financial setback or rejection, may trigger severe depressive feelings and a suicidal act, although in many instances no obvious precipitating event can be found. Our samples showed equal proportions of men and women and no statistically significant differences between the cities (table 7).

3. Cases included in the reactive depression category were those in which there was a direct and clear connection between a grievous event and the suicide, and the subject had no known history of recurrent depressions. The causal event in our cases was in all instances either the death of a loved person or a terminal disease. The differences between male subjects were significant (20 percent Vienna, 8.5 percent Los Angeles, $P<0.01$), but not for women (15 percent Vienna, 12.2 percent Los Angeles, table 7).

4. The classification of emotional instability was used for subjects with a variety of histories of social maladjustment and neurotic or psychotic episodes. There were significantly fewer decedents in this category in Vienna than in Los Angeles. This observation held true for both sexes (table 7). For men, the percents were 3.5

Table 7. Syndromes of suicide of total sample, Vienna and Los Angeles

Syndrome	Vienna							Los Angeles						
	Mean age (years)	Male		Female		Total		Mean age (years)	Male		Female		Total	
		Number	Percent	Number	Percent	Number	Percent		Number	Percent	Number	Percent	Number	Percent
1. Down and out, alcoholic	46.0	14	12.0	2	1.7	16	13.7	53.0	6	7.3	1	1.2	7	8.5
2. Middle-aged depression	50.0	3	2.6	3	2.6	6	5.2	52.0	5	6.1	6	7.3	11	13.4
3. Reactive depression	54.0	23	[1] 20.0	17	15.0	40	35.0	55.0	7	8.5	10	12.2	17	20.7
4. Emotional instability	62.0	4	3.5	5	4.4	9	7.9	40.0	12	[1] 14.6	11	[2] 13.4	23	28.0
5. Old and alone	77.0	2	1.7	17	[2] 15.0	19	16.7	80.0	4	4.9	5	6.1	9	11.0
6. Interpersonal breakup	44.0	5	4.4	4	3.5	9	7.9	33.0	1	1.2	4	4.9	5	6.1
7. Violent man	23.6	2	1.7			2	1.7	26.0	2	2.4			2	2.4
8. Other	37.0	11	9.6	2	1.7	13	11.3	33.0	5	6.1	3	3.7	8	9.8
Total		64		50		114	100		42		40		82	100

[1] Significant at <0.01 level.
[2] Significant at <0.05 level.

for Vienna, 14.6 for Los Angeles ($P<0.01$); for women, 4.4 for Vienna, 13.4 for Los Angeles ($P<0.05$).

However, the criteria for inclusion in this category are unreliable, and no conclusions should be drawn about the mental status of the populations from which these samples were derived. It may be that more people have a history of treatment and hospitalization for mental illness in the United States than in Austria simply because more treatment facilities are available.

5. Those with the "old and alone" syndrome were persons who had minimal social contacts, were in precarious financial circumstances, and who felt they had outlived the usefulness of their lives. They contributed the bulk of the cases in which no close contact could be located. The largest group with this syndrome was Viennese women, 15.0 percent compared with 6.1 percent of the Los Angeles women ($P<0.05$, table 7). The difference for men in the two cities was nonsignificant.

6. The interpersonal relationship difficulty category refers to symbiotic relationships between partners in heterosexual or homosexual liaisons or between parent and child that have come to an end. No significant differences between national samples were found for this category.

Not infrequently the suicide of the "discarded partner" is coupled with homicide of the other partner or someone dear to the partner. It is of interest that while no case of attempted or completed homicide in connection with suicide occurred among the Austrian subjects, there were three completed homicides and one attempted one in the Los Angeles group.

7. There were two men in each city that fitted the "violent man" type. Violent men are young, irascible, and masculine. They run around with the boys and drink fairly heavily without being alcoholics. Although outwardly very virile, they generally have deep-seated doubts about their masculinity. Their preoccupation with guns may be seen as a reaction formation. These men often use guns and sometimes play Russian roulette. No differences were evident between our sample populations.

In 21 of the 196 cases the dynamics were too obscure or the circumstances too unusual to allow categorization, and these are listed under "other" in table 7.

Table 8. When and why decedents last saw a physician, complete data cases, Vienna and Los Angeles

Last visit to physician	Vienna		Los Angeles	
	Number	Percent	Number	Percent
When	50	100	50	100
Within 1 week	10	20	13	26
1 week to 1 month	13	26	8	16
1 to 6 months	5	10	14	28
6 months to 1 year	3	6	8	16
More than 1 year	3	6	3	6
Yes, don't know when	6	12	1	2
No	3	6	1	2
Don't know	7	14	2	4
Why	44	100	49	101
Routine complaints	24	55	16	33
Annual checkup	1	2	13	27
New symptom	14	32	17	35
Don't know	5	11	3	6

Background Information

This section summarizes only the salient findings on the subjects' physical and mental health, their interpersonal and occupational situations, and their developmental histories. Since many questions sought information not readily revealed to strangers or not known to the respondents, the data tend to be less complete. Some of the information was undoubtedly distorted, consciously or unconsciously, by the informants. However, even the fact that information on certain topics seems to be more readily divulged in one culture than another is in itself of interest.

Thirty-six or 72 percent of the Austrians were reported to have been in poor health as compared to 22 or 44 percent of the Los Angelinos ($P<0.01$). Twenty-seven or 54 percent of the Vienna subjects, compared to 8 or 16 percent in Los Angeles, were said to have been getting worse in recent months ($P<0.05$). A little over one-fourth of each group was reported to have undergone surgery in the past 5 years, and approximately half in each group used barbiturates habitually before the suicide. Opiates were reported to have been used by two Viennese and nine Angelinos.

When did the subject last visit a physician? Answers to this question indicated that about a fourth of each group had been seen by a physi-

Table 9. Closeness to spouse, job stability and satisfaction, and residential mobility, complete data cases, Vienna and Los Angeles

Question	Vienna		Los Angeles	
	Number	Percent	Number	Percent
Closeness: Spouse confide in you?	41	101	36	101
Never	9	22	1	3
Seldom	9	22	11	31
Often	15	37	13	36
No information	8	20	11	31
Discuss sexual matters?	41	100	36	100
Yes	6	15	19	53
No	35	85	17	47
Number of close friends?	43	100	48	100
None or few	27	63	16	33
Three or more	16	37	32	67
Occupational history stability?	34	101	32	100
1 position	24	71	14	44
2–4 positions	5	15	14	44
5 or more positions	5	15	4	12
Satisfaction in last job?	34	100	32	100
Yes	30	88	19	59
No	4	12	13	41
Length of time lived in last residence?	50	100	50	100
Less than 1 year	4	8	22	44
1–5 years	11	22	16	32
5–10 years	9	18	5	10
More than 10 years	26	52	7	14

cian within 1 week, 44 percent within 1 month, and 66 percent within 6 months before the suicide act. Only three Viennese and one Angelino were reported as not having seen a physician recently. No significant differences appeared between the groups. However, they differed significantly ($P<0.01$) in reasons for visiting the physician. The greatest difference was that the Viennese seem practically never to have regular health checkups, 2 percent compared with 27 percent of the Los Angeles subjects (table 8).

The Los Angeles respondents specified 15 instances (30 percent) of hospitalization for mental disorders among the victims as compared with eight (16 percent) among the Vienna group. Thirty-one or 62 percent of the Los Angeles subjects were reportedly advised at one time or another to seek psychiatric help, but only 16 or 32 percent of the Viennese were so told ($P<0.01$). Information on the type of psychiatric treatment the subjects had received in and out of hospitals proved too vague to be useful.

The role of alcoholism was determined. Many of the "down-and-out" subjects were alcoholics, but for others, alcoholism, while not the central feature in the suicide, seemed a major contributing factor to their problems of living. Thus, a drinking problem was reported for 20 or 40 percent of the Viennese subjects (two of them women) and for 18 or 36 percent of the Los Angeles subjects (four women). Alcohol seems a serious difficulty for at least a third of the suicidal persons in both groups.

At the time of the suicide 28 (56 percent) of the Viennese and 23 (46 percent) of the Los Angeles subjects were married. Sex appears to be more of a taboo topic in Vienna, as evidenced by replies to the question, "Did he (she) discuss sexual matters with you?" Eighty-five percent of the Viennese said no, compared with 47 percent of those in Los Angeles ($P<0.01$, table 9).

Other areas of conflict within the families in both groups centered around the problem of drinking (28 percent in Vienna and 32 per cent in Los Angeles); sharing no activities with their partners (50 percent of the Viennese and 60 percent of the Los Angelinos); and rarely sharing leisure time (24 percent of the Viennese and 14 percent of the Los Angelinos). There were no significant differences between the samples.

The marked differences in social life between the samples no doubt extend to the societies from which samples were drawn. Club activities, for example, are reported for seven Vienna subjects or 17 percent, as compared to 38 Los Angeles subjects or 56 percent ($P<0.01$). Sixty-seven percent of the Los Angeles sample had three or more close friends, but this was true of only 37 percent of the Viennese ($P<0.01$, table 9).

All socioeconomic strata are represented in both samples, roughly proportionate to the general populations of the two cities. In line with the age distribution of the Viennese population, there was a preponderance of retired subjects in the Vienna group.

When the personal incomes of the two groups were compared by grading income as average, below average, and above average by local standards, no significant differences were

found between the samples. Two Viennese and seven Los Angeles subjects were reported as having had no income at all, and three persons in each group had above average income.

In reference to occupation two items of information stand out: differences in occupational stability were significant ($P<0.01$), with the Los Angeles subjects having held many more positions, and with the Viennese tending to be more satisfied with their last job ($P<0.01$, table 9). Increased monetary pressures during the last year were reported for 20 percent of both groups.

Housing conditions are not strictly comparable between the two cities. About half of the Los Angeles sample lived in one-family dwellings and the other half in apartments; all except three Viennese lived in apartments. The Los Angeles group was not only occupationally but also residentially mobile, as indicated by the number who had moved within the 1 year preceding the suicide. Forty-four percent of those in Los Angeles had moved, but only 8 percent of those in Vienna ($P<0.01$, table 9) had moved.

Many informants could give only minimal replies to questions about the family and developmental history of the subjects. One question concerned the causes of death of the subjects' parents. Twelve percent of the Viennese had both parents living; 58 percent had both parents dead. Twenty-four percent of the Los Angeles sample had both parents living, and 38 percent had both parents dead. In both samples three parents each ended their lives by suicide. If we take the suicide rate for persons over age 40 to be about 34 in 100,000, based on the average of age-adjusted rates for decades after 40 in Los Angeles County, then the parents of our subjects killed themselves at a rate more than 88 times the expected rate. Alcohol seemed to be a common factor, with 40 percent of the parents of both Viennese and Los Angeles subjects reported as either being alcoholics or as having a drinking problem.

Little that was useful could be learned about the subjects' early home life and development. Los Angeles subjects left home slightly younger than Viennese (modal age 19 as compared to 22), and 60 percent of the mothers in both samples were reported to have worked outside the home.

While school systems in the two countries are not comparable, it can be said that most subjects completed public school, which in Austria ends after 8 years and in California after 12 years of attendance. Respondents reported that 5 or 10 percent of the Viennese and 20 or 40 percent of the Angelinos had been dissatisfied with the amount of schooling they had received ($P<0.01$).

Discussion

This study, reporting on a few of the salient points investigated, reveals many similarities in the suicides committed in the two cities as well as differences. Some differences, it was felt, were due to cultural influences, local conditions, mores, values, and so forth. One caution must be borne in mind. The proportion of men to women in both total samples is about 55 to 45 percent, which approximates the sex ratios for those committing suicide previously reported for the two cities, 52 percent men to 48 percent women (1966 Vienna police records) and 61 percent men to 39 percent women (1965 Los Angeles coroner's office records). However, in our study, men who committed suicide were easier to investigate in Vienna than women (table 1) because female informants were easier to contact. Eighty-two percent of the informants were female; 18 percent were male. Thus, there were 57 incomplete data cases for Viennese women and 42 for men, but the complete data cases contain many more men (40 versus 10). The information in depth for the Vienna cases, is therefore, more likely to be about men, and conclusions or inferences must be viewed with caution, especially if they refer to sex differences.

Some general comments can be made about suicide in the two cultures which seem appropriate to the significant differences. Perhaps one can usefully distinguish between avoidable and unavoidable misery. Some of the stresses leading to suicide seem to be more or less universal (for example, loss of loved one, serious illness, and physical and emotional exhaustion), and they are perhaps part and parcel of life in all places and at all times. There are, however,

particular stresses that seem amenable to mitigation if members of a society are sufficiently aware of them and willing to look for remedies. In Vienna, the primary impression about those who commit suicide is that they are very alienated and isolated. This observation emerges from the apparently greater difficulties in communication and the prevalence of syndromes indicative of interpersonal detachment. For example, one of the syndromes found most often for Viennese women was "old and alone." About 21 percent of the men and 27 percent of the women now living in Vienna are over 60 years of age (1961 census). The women live for the most part on very small pensions, all alone in small, dreary, constricted apartments in large apartment blocks. There are few social clubs or similar facilities for oldsters, there is no visiting nurses' service for the ailing, and there is traditionally little social interaction between tenants in apartment buildings.

The generally lower level of social group cohesion and communication seemed to extend even into the family sphere. It was striking to note how little spouses knew about the thoughts, hopes, aspirations, and problems of their partners. Only 27 percent of the Viennese were reported to have voiced their depressive feelings and self-destructive intentions directly to significant others (table 5). This observation is consistent with the 32 percent reported by Ringel in 1961, and it contrasts with the Los Angeles cases, in which 72 percent of the deceased were reported to have indicated their intentions. The impression was that the Austrian informants were not so much unwilling to give such information but that they were often unable to comprehend questions that related to problems of interpersonal communication. The Viennese did not share activities or leisure time with their mates and, in addition, showed great reluctance to discuss any facet of their sex life (tables 5 and 9). In Los Angeles communication seemed not only to occur more often, but also to be more verbal; more of this group were writing regularly or had left a note or had talked about suicide.

Related to the lower sensitivity concerning emotional states is the apparent tendency of Viennese informants to discount psychological causation. Thus, in Vienna the victim's ills were in many more instances attributed to poor and worsening health than to emotional or interpersonal causes than among the Los Angeles victims (table 6). Another finding was that the Viennese were in mental hospitals or used psychiatric help less often than the Angelinos. Paradoxically, the second most frequent cause of the act attributed by the Viennese respondents was mental illness (table 6). In predominantly Catholic Austria the identification of mental illness as the cause of suicide is more acceptable to survivors than other causes and helps them tolerate the event, as well as to facilitate burial arrangements. In Los Angeles, the syndrome of emotional instability was found more often than in Vienna (table 7), and interpersonal difficulties was identified as the primary cause of the suicide in at least one-third of the cases (table 6). The greater proportion of mental disorders found in the Los Angeles sample probably reflects both a greater awareness of and acceptance of mental health problems as factors in everyday living than in Vienna. Thus, for the Los Angeles cases, most suicides were attributed to an interpersonal crisis in the family sphere, with environmental factors playing a minor role. In fact, it is striking in how few Los Angeles cases the suicide was attributed to bad living conditions or financial troubles, and how much more often to breakdowns in interpersonal relations.

We recognize that the interviewers' biases and varying diagnostic criteria may well have affected the results of the study. The Los Angeles interviewers may have been more alert to interpersonal factors because of their background, training, and clinical experience. Using the same protocol in both cities may not have been enough to obviate these biases. However, all interviewers were given extensive training and participated in pilot sessions in an effort to standardize approaches.

Other stresses specific to the Los Angeles sample were the greater pressures reported to advance educationally and occupationally. Related to this pressure were the subjects' frequent moves to new locations and dwellings. Physical and social mobility were more frequent in Los Angeles than in Viennese subjects, and the Cali-

fornians seemed to derive less satisfaction from education or position. This discontent may be related to the American emphasis on position, prestige, and wealth, an ethos which encourages the American to dream that, if not he, then his son can become President (*14*).

Differences between the two cities in the suicidal act itself are of interest. Although Vienna and Los Angeles have about the same overall rate of suicide, the preferred method was domestic gas in Vienna and guns in Los Angeles. Gas was lethal in Vienna until 1965 and not in Los Angeles; guns are readily accessible to Americans and not to Austrians. It is not clear how much accessibility of methods to kill oneself has to do with the overall rate of suicide in a given area. However, knowing that most people have second thoughts about dying if given half a chance, it is probable that readily available means increase suicide rates. It is also worth noting that all of the completed or attempted homicides in connection with suicide were perpetrated in Los Angeles, and all were committed with guns. The three methods which account for 87 percent of the suicides in Los Angeles were—shooting, 39 percent; barbiturates, 32 percent; and hanging, 16 percent. In Vienna, 84 percent was accounted for—by gas, 38 percent; hanging, 25 percent; and barbiturates, 21 percent. Barbiturates have been used increasingly more frequently in Los Angeles, accounting for 39 percent of the certified suicide deaths in 1962, compared with 26 percent in 1953 (*15*). Ringel's study in 1961 (*7*) indicates that in 20 percent of his 50 cases barbiturates were the cause of death.

As noted, the largest group with the syndrome "old and alone" was Viennese women. Do they contribute more than would be expected to the population of older persons who commit suicide in Vienna? How does this proportion compare with age-sex-specific rates in the two cities? A comparison was made between suicide and population statistics for elderly persons over 60 for the two cities. The suicides are those reported by the Vienna police for 1966 and the population totals are from the 1961 census. For Los Angeles, the coroner's 1966 statistics and 1960 census (*16*) totals were used (table 10).

For both Vienna and Los Angeles the number of women who killed themselves was still considerably lower than the number that could be expected from their representation in the general population ($P<0.02$ for Vienna, $P<0.001$ for Los Angeles). The discrepancy between suicides of men and women was larger in Los Angeles than in Vienna, which reflects the relatively higher suicide rates among the elderly men in Los Angeles, as shown by the age-sex-specific suicide rates for persons 60 years or older: Los Angeles—men 47.8, women 23.2; Vienna—men 37.1, women 23.8. Apparently, old men in both cultures continue to be the main source of disproportionate contributions to the suicide problem. However, the "old and alone" women in Vienna constitute a group of special high risk. An intensive study seems called for to explore conditions and contributing factors that might yield an effective preventive program.

Two points of similarity are of interest. With alcoholism noted as a prominent problem in the histories of one-third of those committing the suicides in both Vienna and Los Angeles, it is apparent preventive procedures could be profitably applied in another readily identified high-

Table 10. Suicides of persons 60 years or older, Vienna and Los Angeles, in proportion to the sex distribution of those over 60 years in the cities' populations

Sex	Suicides observed, 1966		Persons 60 or older in 1961 (percent)	Number suicides expected	Observed to expected
	Number	Percent			
Vienna	117	100.0	100.0	117.0	----------
Men	55	47.0	36.3	42.5	+10.7
Women	62	53.0	63.7	74.5	−10.7
Los Angeles	253	100.0	100.0	253.0	----------
Men	152	60.1	42.2	106.8	+17.9
Women	101	39.9	57.8	146.2	−17.9

risk group. Trained personnel in alcoholism clinics as well as in outpatient mental hygiene clinics and mental hospitals could be alerted to look for suicidal tendencies. The supposition that alcoholism may actually provide a substitute outlet for anxieties and tensions for many people, thus obviating overt suicidal activities, apparently does not apply to all persons with the alcoholism syndrome.

An effort was made to determine the lethal intention of the deceased, a significant point in view of the established ambivalence in suicidal behavior (*6*). The question is not easy to assess, for information on the relevant factors is often difficult to obtain from survivor-informants close to the deceased and often reacting with their own dynamics of guilt, anxiety, shame, and denial. Nevertheless, the rough estimate was that about 70 percent of the two groups had been serious in their intention to die. Even if one makes the most extreme assumption—that none was preventable—presumably interventive activity would have been both feasible and effective for the other 30 percent. A 30 percent reduction in the number of suicides would make a considerable dent in the suicide rates.

Many of the larger social problems mentioned as factors in suicidal behavior are not amenable to reform in the short run. Also, of course, these factors affect many others who do not react with a self-inflicted fatal consequence. Laws specifically against the act of suicide seem to have little impact on the suicide rate and practically no deterrent effect. Austrian statutes make suicide a crime, yet the rate has been high since the turn of the century in that country. England, with a rate in the middle ranges, between 10 and 11 per 100,000, repealed the law against suicide in 1961, after it had been in effect for at least a century. The suicide rate in England has not varied significantly since repeal. Nine of the 50 U.S. States have laws against suicide which are rarely, if ever, enforced. Yet preservation of life and social regulation are society's responsibility, and laws to control the availability of some common methods, such as acquisition of guns in the United States and the ease of obtaining barbiturates in both countries, seem socially justifiable. It is uncertain if such steps would affect the suicide rate.

However, depoisoning the gas in Vienna has had considerable impact. The carbon monoxide content in domestic gas has been progressively reduced from 9.2 percent in 1965 to 6.8 percent in 1966 to between 4.5 and 2.5 percent in 1967. Even at the lowest level, the gas is still lethal if a person goes to extraordinary lengths. The following table shows the total number of suicides and the number and percent committed using household gas in the city from 1961 to 1967 (*17*).

Year	*All suicides*	*Suicides by gas*	
		Number	*Percent*
1961	347	199	57. 3
1962	321	181	56. 4
1963	308	202	65. 6
1964	288	194	67. 4
1965	349	175	50. 1
1966	264	130	49. 2
1967	246	80	32. 5

Not only was the proportion of suicides by gas to total suicides radically reduced but also the overall rate has dropped by 30 percent since 1965, a reduction that far exceeds expectations from the long range trend. In view of these results, it seems worthwhile to attempt external controls for some of the other common methods.

Primary prevention (antevention, that is, detecting the suicide-prone person before he becomes suicidal) is beset with difficulties. Not the least difficult task is to predict accurately a rare event even with the best screening procedures (*18*). However, there seems to be ample support in this study for the view that we need not seek out the individual person contemplating suicide; he will let us know of his plight, if we are willing to perceive the message. Many suicidal persons distribute clues to their preoccupations, but our study also shows that the clues are often ignored. With 23 percent of the group visiting their physicians within 1 week and 43 percent within 1 month before they acted, it is apparent that physicians, especially, have an excellent opportunity for identification and intervention. Ringel (*7*) reported that in half of his cases the person had seen a physician just before he acted. The need for training general practitioners in sensitivity to suicide prodromes has been recognized (*19*) and to some extent followed through in Los Angeles; few medical men in Austria are aware that suicide prevention and allied mental health tasks fall

within the province of the general practitioner (*7*, *20*).

However, most efforts in suicide prevention must at present be carried out in specialized services, such as the Suicide Prevention Center in Los Angeles and the Vienna Suicide Prevention Service, agencies mentioned by the interviewers in the study. When asked, 82 percent of the respondents in Vienna and 62 percent in Los Angeles stated they had never heard of the agencies, an impressively high percentage in the light of the two and one decades, respectively, of their existence in the communities. There is an obvious need for more suicide prevention and crisis centers with trained staffs that can be reached around the clock, along with informational publicity and extensive public education about suicide. In recent years, suicide prevention services have sprung up in many localities and, although there are now 104 in the United States, many more are needed.

A new center, Telefonseelsorge, a round-the-clock telephone crisis clinic, began operating in Vienna in the fall of 1967. However, the need for more such centers is even greater in Austria and other parts of Europe than in the United States.

But greatest of all is the need to dispel the taboos (*5*, *7*, *21*) and permit both intervention and antevention processes to operate. Suicide prevention services will be of little value until the cry for help is allowed to be heard.

Summary

Cross-cultural differences and similarities in suicide were investigated by examining 50 suicides committed in Vienna and 50 in Los Angeles. Through in-depth interviews with family and other informed survivors, information was sought on details of the suicide act, communication given and received about suicidal intent, previous history of suicide attempts, estimation of lethal intent, personality syndromes, and personal and background information about the deceased. Comparable data for the two cities were obtained by using a protocol with similar items.

In general, the Viennese seemed socially alienated and isolated and in poor communication with spouses, relatives, and close friends. Those committing suicide in Los Angeles were more often in strained or broken interpersonal relationships and under great social and occupational pressures. Communication of feelings seemed to occur more often among the Los Angeles cases than the Viennese cases. The results showed no significant differences in age, sex, and marital status for the two groups.

The Viennese used domestic gas primarily to kill himself while the Los Angelino most often used a gun. For the Viennese, the cause of the suicide was more often attributed to physical illness; for the Los Angelinos, most often to interpersonal difficulties. About two-thirds of the suicidal acts in both groups seemed intended to be lethal.

More Viennese men showed reactive depressions, more Viennese women were old and alone, and more Los Angeles men and women showed emotional instability. Alcohol was a serious problem for at least a third of the decedents in both groups. Those in Los Angeles were occupationally and residentially more mobile than the Viennese.

Ways of decreasing the suicide rate in both cities are discussed, including legal, social, and professional action. At present, increased direct intervention capabilities through more suicide prevention centers are needed. For the future, primary prevention programs to improve early identification of the suicide-prone and also to provide public education that dispels taboos hold most promise.

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Alcoholism Research at Downstate Medical Center

A National Institute of Mental Health grant of $250,468 has been awarded to the State University of New York, Downstate Medical Center, New York City, for the first year of a major alcoholism program.

The proposed 5-year program will include experimental and clinical studies, training, and drug trials. Dr. Benjamin Kissin, professor of psychiatry at the center, is principal investigator.

In one study, 60 newly admitted patients, aged 25–55 years, with at least a 5-year history of alcoholism will be studied to determine the effects of experimentally induced intoxication and withdrawal on the patients' sleep patterns, behavior, and biochemistry. The investigators will focus on the mechanisms underlying the development of physical and psychological dependence.

Among the drugs to be tested are haloperidol, dexoxadrol, disulfiram (Antabuse), paraldehyde, and chlordiazepoxide alone and in combination with a tranquilizer and an antidepressant. The drugs will be tested in more than 1,000 alcoholics, both on a long term and a short term basis.

Investigators will study the effects of the drugs on gait, speech, tremulousness, hallucinations, visual and sleep disturbances, appetite, nausea, sweating, and other behavioral manifestations of alcoholism.

Rats will be used to supplement the findings from human subjects. Studies will be made of the effects of moderately heavy alcohol intake on the rats' sleep patterns, urinary excretion of biogenic amines and their metabolites, and the activity of serotonin and norepinephrine in the brain.

The Downstate Medical Center alcoholism program will also include a 2-year postdoctoral training program leading to a D.M.S. degree. The course is open only to medical doctors who have completed 2 or 3 years of psychiatric residency.