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PSYCHOLOGICAL AND CULTURAL MECHANISMS OF SUICIDE

Jüri Allik and Anu Realo

University of Tartu

Abstract. At the cultural level, persistent associations exist between three groups of psychological variables, individualism-collectivism, locus of control, and subjective well-being, and the suicide rate. These associations may be opposite to what would be expected of purely individual-level analysis. There are several forms of suicide which are controlled by different social and cultural factors: individualism and the perceived locus of control, which share only an insignificant amount of the common variance, can nevertheless have strong and independent correlations with the suicide rate. We found that regarding the suicide rate, a moderate individualism is more dangerous than an extreme one; the external locus of control is a risk factor, especially in the association with the low individualism; and satisfaction with different aspects of life has an opposite effect on the suicide rate: men's satisfaction with finances and women's satisfaction with family increases suicide rate but women's satisfaction with finances and themselves decreases it. These findings suggest that the sociological theory of suicide needs to be supplemented by both psychological and cultural theories in order to explain through which psychological and cultural mechanisms the mind of an individual is programmed.

1. Introduction

Durkheim (1963/1897) proposed a general framework in which the frequency of suicide in human societies can be understood. Durkheim maintained that as a social phenomenon suicide can be rationalized not as an act of an individual's will, but as an aftermath of some impersonal social forces. He distinguished between four different types of suicide: *altruistic*, *egoistic*, *anomic*, and *fatalistic*. What is common to all these types is the closeness of a person's relationship to society. For example, the egoistic suicide occurs when the individual has too few ties and altruistic when there are too impending ties with the community. In the case of another form of suicide, the anomic suicide, the society is present in the individual but still unable to control his desires and behavior. Although the proper

level of explanation of the suicide rate is impersonal social powers or forces, suicide is committed by real individuals. This means that the sociological theory needs to be supplemented by a psychological theory which explains through which psychological mechanisms these social forces are programming the mind of an individual.

In addition to purely psychological mechanisms, there is a need for other intermediating groups of variables that regulate relations between an individual and society to which one belongs. This intermediating variables can be understood in terms of "shared attitudes, beliefs, categorizations, expectations, norms, roles, self-definitions, values, and other such elements of subjective culture found among individuals where interactions were facilitated by shared language, historical period, and geographic region" (Triandis 1972:3). In other words – *culture*. From a functional point of view, culture is "the collective programming of the mind which distinguishes the members of one group or category of people from another" (Hofstede 1991:5). Each element of the conceptual world can program an individual's behavior by making occurrence of certain actions more or less probable. The operational meaning of values, as all other elements of the conceptual world, is to encourage certain behaviors and discourage others. Individuals sharing a common culture may also have similar beliefs in the degree of contingency which exists between their behavior and subsequent consequences, which, in turn, can influence behavior.

Until recently it was customary to compare data from an exotic culture with "norm" data from one of Anglo-Saxon countries. During the last few decades, however, this model has been replaced with a more systematic approach involving a large set of cultures for comparison. A landmark of this new approach was established by monumental research of Hofstede (1980, 1983) who gathered responses from more than one hundred thousand respondents from 67 countries. His study concerned mainly work-related values of employees from a multinational corporation (IBM). Schwartz (1990, 1994) continued this research tradition by studying a more comprehensive set of values defined by him "as desirable goals, varying in importance, that serve as guiding principles in people's lives" (1994:88). Currently there are many other projects underway in which relatively large samples of nations or cultural groups are studied in regard of their psychological attributes (cf. Inglehart 1990, Lynn 1981, Michalos 1991, Smith, Trompenaars and Dugan 1995, Veenhoven 1993).

From analysis of the intercorrelations among the mean nation scores, it is possible to derive general factors or dimensions by which values of one nation differ from other nations reflecting the dominant pattern of programming that a particular society evolves in the regulation of activities of its members. It is important to notice that certain attributes may be diagnostic at aggregated level when averaged data of groups of nations are compared but not necessarily at the level of individual data (Hofstede and Spangenberg 1987, Leung and Bond, 1989). Therefore, not all psychological attributes, which are diagnostic at the cultural level, have their equivalents at the individual level and *vice versa*. It is logical to

expect that the psychological attributes that are affirmed in a given culture and had become a national character can more or less directly influence its members' behavior including their relatively higher or smaller propensity to commit suicides.

The purpose of this study is to find out possible psychological moderators of the self-destructive behavior and to relate them to the existing psychological theories of suicide.

2. Data

Hofstede (1983) studied systematically 50 countries (national cultures) and three multicountry regions in respect of their work-related values. The respondents were employees in IBM subsidiaries of these countries. The questions aimed to find out the importance of different work and life goals and was rated on a 5-point scale. The survey took place twice, once in the period 1968–1969 and once in 1971–1973 (Hofstede 1983). Four factors were identified on the basis of factor analysis: *Individualism* vs. *Collectivism* (IDV), *Power Distance* (PDI), *Uncertainty Avoidance* (UAI), and *Masculinity* vs. *Femininity* (MAS). For example, IDV dimension was identified on the basis of 14 items stressing an individual's independence from organization ("time for individual life") or things that organization does for the individual ("training", "physical working conditions", "freedom in the job" etc.)

In addition to this we also used ratings of 31 countries on a 10-point scale of individualism versus collectivism (IDV^{Tr}) which was made by H. C. Triandis and reported by Diener and Diener (1995). The individualism ratings correlated significantly with the Hofstede's (1983) IDV $r(23) = .69$, $p < .001$.

Schwartz (1994) derived an alternative system of values that are dominant in a culture. His respondents from 86 samples drawn from 41 cultural groups in 38 nations rated 56 single values (e.g., social power, independence, respect of traditions, etc.) as guiding principles in their lives using 7-point scale. Only 45 of 56 values demonstrated to have cross-culturally consistent meanings and were included in further analyses. Data were gathered during the period of 1988–1992. On the basis of grouping these 45 values were reduced, mainly by means of multidimensional scaling, to 7 dominant value-groups found in the plain of the two-dimensional solution: *Conservatism*, *Intellectual* and *Affective Autonomy*, *Hierarchy*, *Mastery*, *Egalitarian Commitment*, and *Harmony*. Scores of 38 countries and cultural groups are given in Table 7.3 (Schwartz 1994).

Data concerning the Rotters (1966) locus of control scale (I/E) was from Smith, Trompenaars and Dugan (1995) in which a databank containing 9,140 respondents from employees working in different business organizations of 43 nations, except for Estonia which data we obtained from our own study made around 1986. The mean externality for the Estonian sample was 11.18. Raw mean externality values are given in Table 1, data were collected at varying times between 1983 and 1993 (Smith et al. 1995).

Life satisfaction and self-esteem data were obtained from E. Diener and M. Diener (1995). Their study involved 13,118 college students from 49 universities in 31 countries on five continents. Students rated 12 life domains in regard to their satisfaction with family, friends, self, finances, and life on a scale from 1 (*terrible*) to 7 (*delightful*).

Data concerning gross national product per capita (GNP in US dollars, 1980), suicide rate per 100,000 inhabitants from the period of 1983–1990 and some other demographic indexes were from the World Bank, OECD, and the World Health Organization as reported in United Nations Demographic Yearbook, 1991, and in the UNICEF publication about the state of the world's children, 1991. A few figures were obtained from other reliable sources.

Throughout the present article we report Spearman's rank correlation coefficient (r_s) parallel to Pearson's correlation coefficient (r) where it was found necessary.

3. Results

3.1. Values

Durkheim (1963) has already noticed that poverty can be considered as a protection against suicide: the suicide rate is high in economically advanced and low in relatively poor countries. The linear correlation between suicide rate and country's GNP is about $r\,(49) = .57$, $p < .000$ (the rank correlation is even higher, $r_s = .68$) (see Figure 1[1]). From various economic and demographic indicators the GNP, the total fertility rate, the percent of urbanized population, and the number of TV sets per 1000 inhabitants are four best predictors of the suicide rate jointly accounting for about 63% of the total variance. This is quite a remarkable proportion of variance which can be even slightly increased by taking into account nonlinearity between suicide rate and economic and demographic measures. Thus it supports the hypothesis that suicide rates are higher in countries where the quality of life is better (cf. Lester 1990).

However, the suicide rate is also related to the system of values dominant in society. The suicide rate correlated significantly with Hofstede's PDI $r(41) = -.55$, $p < .000$, and IDV $r(41) = .56$, $p < .000$, Triandis' ratings of individualism IDV^{Tri} $r(24) = .55$, $p < .005$, Schwartz's *Mastery* $r(26) = .51$, $p < .009$. Individualism was defined by Hofstede (1983:336) as "a preference for a loosely knit social framework in society in which individuals are supposed to take care of themselves and their immediate families only" as opposed to "a preference for a tightly knit social framework in which individuals can expect their relatives, clan, or other in-group to look after them, in exchange of unquestioning loyalty". Thus, in a good harmony with Durkheim's views, individuals in societies with loosely knit social framework are more prone to commit suicide. Schwartz (1994) describes *Mastery* values as typical of individualistic societies – the active efforts

[1] For country names and abbreviations see Appendix.

to modify one's surroundings, mastery of the social environment through self-assertion and getting ahead of other people.

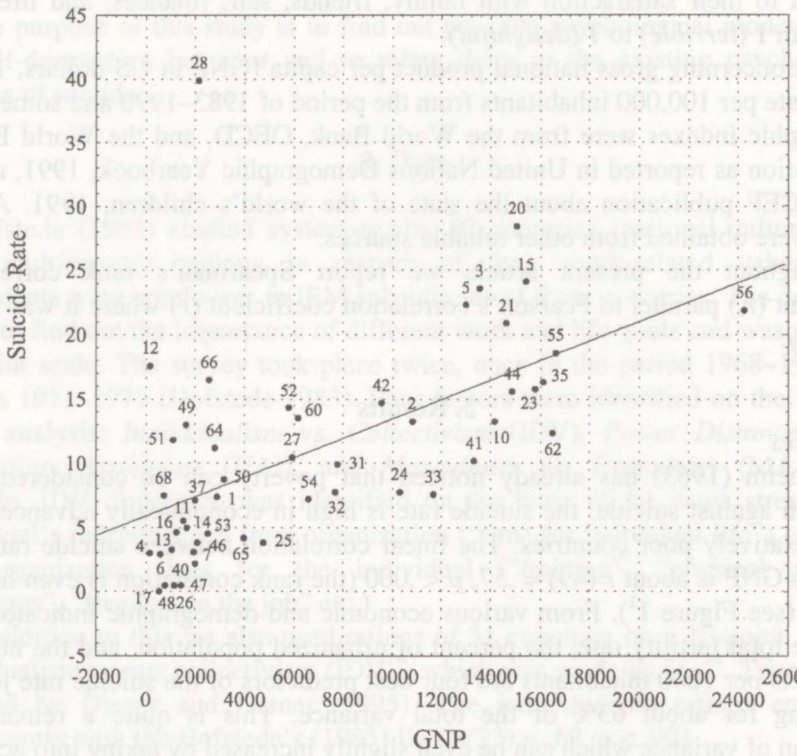


Figure 1. Reported suicide rate per 100 000 inhabitants (1983-1990) by gross national product (GNP) in 1980 (US dollars), $N = 49$. Based on data from United Nations, *Demographic Yearbook*, 1991 and UNICEF, *The State of the World's Children*, 1991.

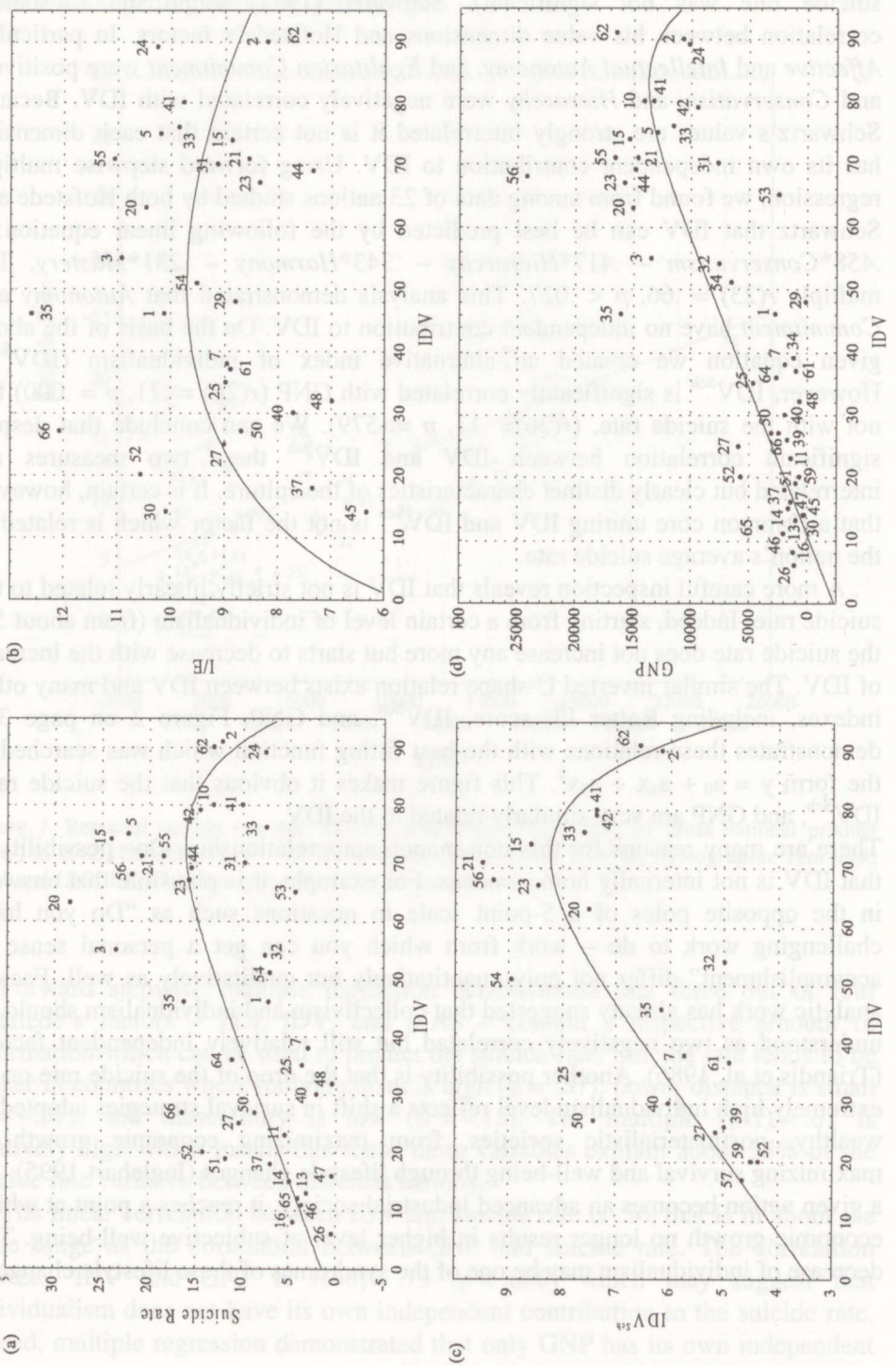
Forward stepwise multiple regression demonstrated that three out of four Hofstede's factors – PDI, IDV, and MAS – contain a respective amount of information which can be used to predict the suicide rate. Suicide rate tends to be higher in countries where individualism is high ($\beta = .37$), power distance is small ($\beta = -.37$), and masculinity is low ($\beta = -.15$). The multiple $r(41) = .61$ is relatively high which means that these three variables explain about 38% of the suicide rate variance between different nations.

The linear correlation between IDV and suicide rate is .56, that is in about the same range as the correlation between GNP and suicide rate. The correlation between IDV and GNP is $r(48) = .79$ ($p < .000$) which may suggest that individualism does not have its own independent contribution to the suicide rate. Indeed, multiple regression demonstrated that only GNP has its own independent

contribution to the suicide rate (the partial correlation between IDV and the suicide rate was not significant). Schwartz (1994) found the substantial correlation between his value dimensions and Hofstede's factors. In particular, *Affective* and *Intellectual Autonomy*, and *Egalitarian Commitment* were positively and *Conservatism* and *Hierarchy* were negatively correlated with IDV. Because Schwartz's values are strongly interrelated it is not certain that each dimension has its own independent contribution to IDV. Using forward stepwise multiple regression, we found from among data of 23 nations studied by both Hofstede and Schwartz that IDV can be best predicted by the following linear equation: – .458**Conservatism* – .417**Hierarchy* – .343**Harmony* – .231**Mastery*. The multiple $r(23) = .66$, $p < .027$. This analysis demonstrated that *Autonomy* and *Commitment* have no independent contribution to IDV. On the basis of the above given equation we created an alternative index of individualism (IDV^{Sch}). However, IDV^{Sch} is significantly correlated with GNP ($r(26) = .71$, $p = .000$) but not with the suicide rate, ($r(26)= .11$, $p = .579$). We can conclude that despite significant correlation between IDV and IDV^{Sch} these two measures are interrelated but clearly distinct characteristics of the culture. It is certain, however, that a common core uniting IDV and IDV^{Sch} is not the factor which is related to the nation's average suicide rate.

A more careful inspection reveals that IDV is not strictly linearly related to the suicide rate. Indeed, starting from a certain level of individualism (from about 55) the suicide rate does not increase any more but starts to decrease with the increase of IDV. The similar inverted U-shape relation exists between IDV and many other indexes, including Rotter I/E score, IDV^{Sch}, and GNP. Figure 2 on page 312 demonstrates these relations with the best fitting function which was searched in the form $y = a_0 + a_1x + a_2x^k$. This figure makes it obvious that the suicide rate, IDV^{Sch}, and GNP are very similarly related to the IDV.

There are many reasons for this non-monotonous relationship. One possibility is that IDV is not internally homogeneous. For example, it is plausible that answers in the opposite poles of a 5-point scale to questions such as "Do you have challenging work to do – work from which you can get a personal sense of accomplishment" differ not only quantitatively but qualitatively as well. Factor-analytic work has already suggested that collectivism and individualism should be understood as two negatively correlated but still relatively independent factors (Triandis et al. 1986). Another possibility is that the drop of the suicide rate on an extremely high individualism level reflects a shift in survival strategies adopted in wealthy, postmaterialistic societies, from maximizing economic growth to maximizing survival and well-being through lifestyle changes (Inglehart 1995). As a given nation becomes an advanced industrial society, it reaches a point at which economic growth no longer results in higher level of subjective well-being. The decrease of individualism may be one of the syndromes of these lifestyle changes.


(a)
Suicide Rate
IDV
(b)
I/E
IDV
(c)
IDV5th
IDV
(d)
GNP
IDV

3.2. Locus of control

At the individual level it is repeatedly demonstrated that there is a substantial association between suicidal behavior and locus of control: individuals who had engaged in suicidal behaviors have been characterized by more external locus of control (Lester 1989a, 1989b, Pearce and Martin 1993, Strang and Orlofsky 1990). The existing data seem to indicate that the same rule is valid at the national level: countries with a high suicide rate have also higher mean externality score. The linear correlation between society's suicide rate and I/E score is $r(32) = .51$, $p = .003$ ($r_s(32) = .55$, $p < .001$) which explains about 1/4 of the total variance. Figure 3 shows the dependence of the suicide rate on nation's I/E score. It is

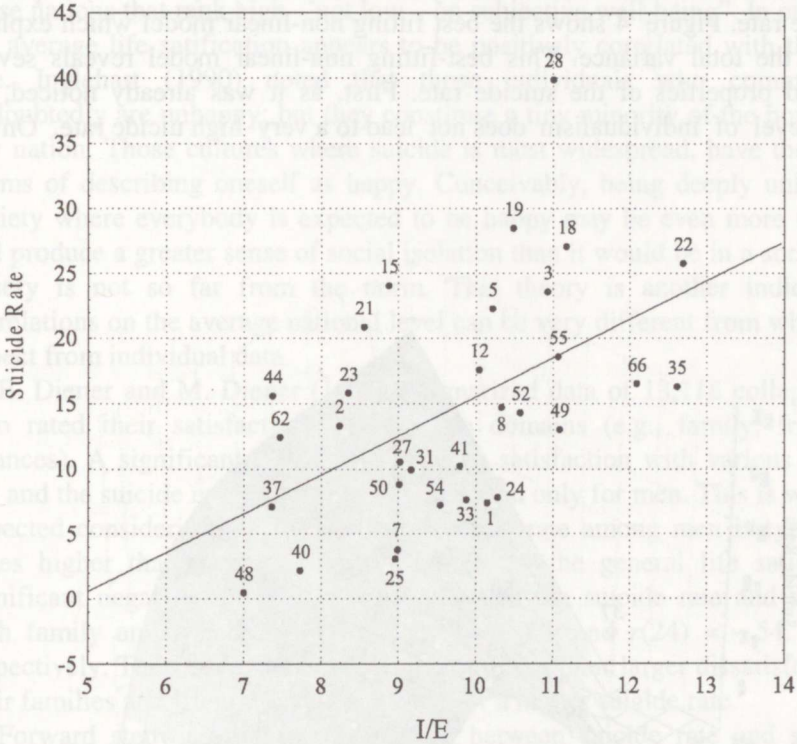


Figure 3. Reported suicide rate per 100 000 inhabitants (1983-1990) by Rotter internality-externality (I/E) score, $N = 32$. Based on data from United Nations, *Demographic Yearbook*, 1991 and Smith, Trompenaars and Dugan (1995).

← *Figure 2.* Relation between (a) Hofstede's individualism index (IDV) and reported suicide rate per 100,000 inhabitants (1983–1990): y = (1.4605304) + (0.2300294)*x + (–3.263371e–15) *(7.951003)^x, r^2 = 39.9%, N = 41; (b) IDV and Rotter internality-externality (I/E) score: y = (5.54139) + (–2.6158056)*x + (3.0417214)*(0.9695087)^x, r^2 = 29.7%, N = 30; (c) IDV and Schwartz's individualism index (IDV^{Sch}): y = (3.358548) + (0.0782739)*x + (–.1.710166e–14) *(7.3513626)^x, r^2 = 60.0%, N = 23; (d) IDV and gross national product (GNP) in 1980 (US dollars): y = (–2320.188) + (212.72995)*x + (–1.553389e–18)*(10.954905)^x, r^2 = 63.3%, N = 48. Based on data from Hofstede (1983); United Nations, *Demographic Yearbook*, 1991; Smith, Trompenaars and Dugan (1995); Schwartz (1994) and UNICEF, *The State of the World's Children*, 1991.

remarkable that externality is not correlated with the economic prosperity: the correlation between I/E and GNP was not significant ($r(37) = .17$, $p = .319$). At variance from IDV the I/E score appears to be linearly related to the suicide rate. When we attempted to predict the suicide rate from both I/E and GNP, only I/E made an independent contribution to the suicide rate. Thus, the suicide rate is better explained in psychological terms than by indicators of economic prosperity.

So far we found that two psychological characteristics, IDV and I/E, can explain a remarkable proportion of the variance in the suicide rate. Next we attempted to characterize their joint impact on the suicide rate. We assumed that the influence can be divided into three separate components: individual contributions of IDV and I/E, and their joint multiplicative (IDV*I/E) impact on the suicide rate. Figure 4 shows the best fitting non-linear model which explains 45.4% of the total variance. This best-fitting non-linear model reveals several unexpected properties of the suicide rate. First, as it was already noticed, the extreme level of individualism does not lead to a very high uicide rate. On the

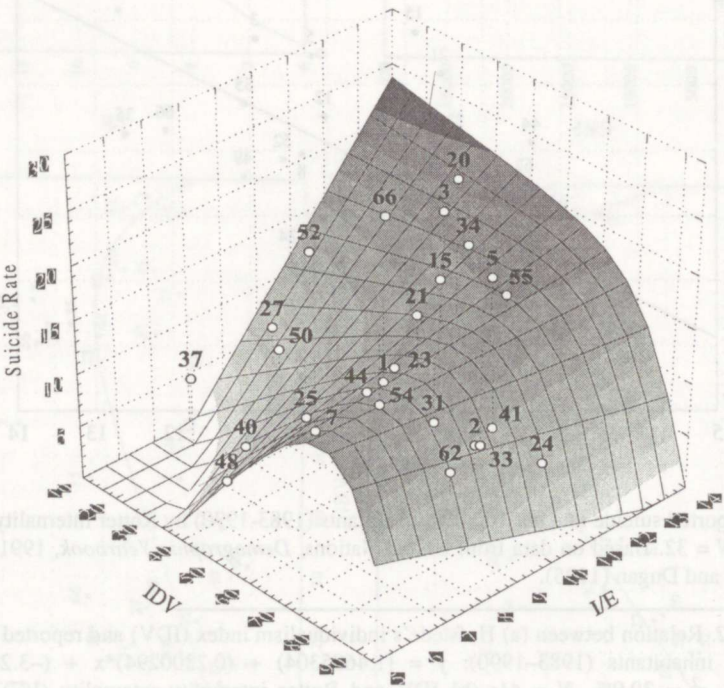


Figure 4. Hofstede's individualism index (IDV), reported suicide rate per 100 000 inhabitants (1983-1990), and Rotter internality-externality (I/E) score: z = (–40.635) + (0.784)*x + (4.653)*y + (–0.0613) *(x)*(y) + (–1.1457e–17)*(9.2103) ^{x}, $r^2 = 45.4\%$, $N = 26$. Based on data from Hofstede (1983); United Nations, *Demographic Yearbook*, 1991 and Smith, Trompenaars and Dugan (1995).

contrary, very high individualism appears to prevent suicides and diminish their occurrence compared with the moderate level of individualism. The external locus of control generally favors suicides. What is surprising, however, is the negative impact of the multiplicative term IDV*I/E: the greatest danger to the human life is not the combination of the high external locus of control with very high individualism but its association with low individualism.

3.3. Life satisfaction

As it was noticed by Inglehart (1990:245), the relation between suicide rate and subjective well-being is in general positive: "Suicide rate tends to be higher in those nations that rank high – not low – on subjective well-being". In other words, the average life satification appears to be positively correlated with the suitcide rate. Inglehart (1990) noted that those individuals who commit suicide undoubtedly are unhappy; but they constitute a tiny minority of the population of any nation. Those cultures where suicide is most widespread, have the strongest norms of describing oneself as happy. Conceivably, being deeply unhappy in a society where everybody is expected to be happy may be even more unbearable and produce a greater sense of social isolation than it would be in a society where misery is not so far from the norm. This theory is another indication that correlations on the average national level can be very different from what one can expect from individual data.

E. Diener and M. Diener (1995) summarized data of 13,118 college students who rated their satisfaction with 12 life domains (e.g., family, friends, and finances). A significant correlation between satisfaction with various aspects of life and the suicide rate in the society was found only for men. This is what can be expected considering the fact that the suicide rate among men is typically 2–3 times higher than among women. Contrary to the general life satisfaction, a significant negative correlation exists between the suicide rate and satisfaction with family and friends, $r(24) = -.42$, $p = .039$ and $r(24) = -.54$, $p = .006$, respectively. Thus, societies in which men express their larger dissatisfaction with their families and friends have a tendency for a higher suicide rate.

Forward stepwise multiple regression between suicide rate and satisfaction with different aspects of life indicated a very strong association (multiple $r(24) = .84$, $p < .003$) between them explaining 69.7% of the cross-nation variance of the suicide rate. As it was already noticed, satisfaction with different aspects of life has the opposite effect on the suicide rate: men's satisfaction with finances ($\beta = .91$, $p < .004$) and women's satisfaction with family ($\beta = .95$, $p < .006$) *increases* suicide rate but women's satisfaction with finances ($\beta = -.80$, $p < .015$) and themselves ($\beta = -.97$, $p < .05$) *decreases* suicide rate. Again, it is difficult to believe that men's satisfaction with finances and women's satisfaction with family are risk factors for suicide by themselves. Another explanation, similar to that proposed by Inglehart (1990), is certainly more plausible: in a society where men

have very high expectations for high income and women regard happy family life as a social norm, it is very difficult to tolerate deviations from these standards. It is quite surprising that women's dissatisfaction with themselves and their financial situation creates some sort of *immunity* against suicide. One possible explanation is that women's dissatisfaction with themselves and their material position reflects actual material well-being: people in poor countries are generally less satisfied with themselves and various aspects of their life (Diener, Diener and Diener 1995, Diener, Sandvik, Seidlitz and Diener 1993, Veenhoven 1993). Durkheim believes that poverty protects against suicide because it is a restraint in itself. Poverty, in other words, is the best school for teaching self-restraint. Wealth, on the other hand, by the power it bestows, deceives us into believing that we depend on ourselves only. The less limited one feels, the more intolerable all limitations appear (Durkheim 1963). Indeed, women's dissatisfaction with themselves is negatively correlated with GNP (rank correlation $r_s(31) = -.43$, $p = .016$). However, there is no correlation between women's satisfaction with finances and GNP. Thus, this explanation can be supported only partly.

4. Discussion

4.1. Main conclusions

As it was convincingly demonstrated by Durkheim (1963), there are several forms of suicide which are controlled by different social and cultural factors. Our study a supported this conclusion. In particular, we found that individualism and the perceived locus of control, which share only an insignificant amount of the common variance, can nevertheless have strong and independent correlations with the suicide rate. At variance from the locus of control, individualism is directly related to the material well-being and belongs to the same category of concepts as neuroticism and subjective well-being: they all have a steep rise across the lower income nations, but once nations reach a level of reasonable economic wealth, there is only a little further increase in the emotional stability (Lynn 1981) and in the subjective well-being (Diener et al. 1995) or even a decrease in individualism (Figure 1). On the other hand, the locus of control appears to be relatively independent from demographic and economic variables associated with individualism, material and subjective well-being, but has its independent relation to the suicide rate. Smith with colleagues (1995) noticed that the Rotter scale is not unidimensional and in fact consists of at least three relatively independent topics grouped around concepts of the Personal-Political, Individual-Social, and Luck. Only the Personal-Political dimension was somewhat correlated with raw I/E country means and came closest to the original concept formulated by Rotter (1966).

This study also demonstrated the importance of the cultural level analysis besides purely individual level analysis. For example, at the individual level it is hard to expect that the life-satisfaction and happiness are positively correlated

with the tendency to commit suicide. Nevertheless, the satisfaction with various aspects of life can be positively associated with the suicide rate. At the cultural level we were able to observe persistent associations between the suicide rate and three groups of psychological variables – individualism-collectivism, locus of control, and subjective well-being. We found that in regard to suicide rate, a moderate individualism is more dangerous than an extreme one; the external locus of control is a risk factor, especially in the association with low individualism; and satisfaction with different aspects of life has an opposite effect on the suicide rate: men's satisfaction with finances and women's satisfaction with family increases suicide rate but women's satisfaction with finances and themselves decreases it.

4.2. Relation to psychological theories

There are two major psychological theories of suicide, the *aggression* and the *escape* theory. *Aggression* theory of suicide was proposed by Freud (1917) who viewed suicide as a kind of aggression which is directed towards the subject him- or herself. Only in *Beyond the pleasure principle* Freud (1920) granted the impulses of aggression an independent status of a primary (death) instinct, the struggle of which with Eros constitutes the main engine of the evolution of human civilization. The death instinct is "an urge inherent in organic life to restore an earlier state of things which the living entity has been obliged to abandon under the pressure of external disturbing forces" (p. 36). In other words, "the aim of all life is death" (p. 38). The death instinct is frequently turned outward to preserve individual and serving interests of the pleasure principle. In order to restrict the uncontrolled inflation of instincts, the human culture has to invent mechanisms of their suppression. The super-ego, presented in the form of moral conscience, redirects the aggression from outside target towards a person's own self. The increase of control over a person's aggressive impulses leads inevitably to the increase of the strength of the super-ego and its aggressiveness towards a person's ego. Ego starts to feel abandoned because the super-ego hates and persecutes, instead of loving. If a person feels that he or she is completely deserted by his or her super-ego, who is supposed to play a role of a father and guarding spirit, but not an inquisitor, the person could die.

In a certain respect an alternative approach was proposed by Adler (1925/1920) who maintained the idea that suicide is an *escape* from an unresolvable conflict with environment. According to Adler, the depression is always caused by a deep-rooted feeling of inferiority. Depression is a personal way of coping with this inferiority. From early childhood the depressed subjects show a lack of incentives, activity, avoiding difficulties and personal responsibility. On the other hand, the subject has always nourished a secret idea of one's own superiority. In order to attain this goal, the subject adopts a tactics restricting oneself to a limited circle of persons whom one can dominate, mostly through complaints, tears, and sadness. Melancholia appears regularly under the

impact of life-crisis as a consequence of losing control over one's environment. There are two outcomes of the crisis: first, the subject's tactic reaches its secret goal and the depression recedes because the subject celebrates one's domination over one's small world. But if one fails, one might end with suicide, which may be perceived as the only solution to one's hopeless situation in attempts to fight against the hostile environment. Recently, Baumeister (1990) provided some new arguments in support of the escape theory of suicide with the emphasis on negative effects arising from the unfavorable comparison of the self with standards.

The main problem, however, is that these two theories are formulated in very general terms and there is a considerable gap between them and more specific propositions that can be empirically tested or proved incorrect. Nevertheless, it appears that Freud maintained that suicide results from an excessive social regulation. Translating his understanding into the locus of control terminology, the helplessness and a feeling of being abandoned are created by a belief that all life events are out of control which in extreme forms can lead to suicide. In this particular respect, Freud's theory agrees with Adler's theory of suicide which also maintains that life-crises occur as a result of loss of control, either perceived or actual, over a person's environment. Freud's theory of suicide also appears to presuppose the existence of some sort of comparison mechanism: the individual becomes desperate because standards presented by super-ego are too high compared with the real situation. This idea has a resemblance to Inglehart's (1990) proposal that in a society that in general ranks high on subjective well-being and where everybody is expected to be happy, being unhappy is much more intolerable than in a society where complaints about life quality are the norm.

It is also quite obvious that these two major psychological theories are not incompatible. There are different forms of suicide and Freud and Adler could simply have described two different psychological mechanisms underlying these two forms of suicide. For example, it is plausible that Freud's theory is a model for the *egoistic* and Adler's theory for the *anomic* form of suicide. In fact, Durkheim (1963) himself gave some hints about psychological mechanisms through which different suicide types could find a way to their accomplishment. He proposed that the egoistic suicide could be characterized by a general depression, in the form of melancholia or apathy. Altruistic suicide, on the contrary, could be best described by a certain expenditure of energy, in the form of mystic enthusiasm or calm feeling of duty. Anger, irritation, disgust and all the other emotions customarily associated with disappointment are involved in the nature of anomic suicide, leading to violent recriminations against life in general or against one particular person (homicide-suicide). These forms, according to Durkheim, are often combined with one another and in a single suicide may be found the characteristics of several types.

Address: direct all correspondence to
Jüri Allik
Department of Psychology
University of Tartu
Tiigi 78, Tartu EE2400
Estonia
E-mail: jyri@psych.ut.ee

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Appendix

An alphabetical list of the countries included in this study ($N = 60$)

Country	*Abbreviation*
Argentina	1
Australia	2
Austria	3
Bangladesh	4
Belgium	5
Botswana	6
Brazil	7
Bulgaria	8
Canada	10
Chile	11
China	12
Colombia	13
Costa Rica	14
Denmark	15
Ecuador	16
Egypt	17
Estonia	18
Finland	20
France	21
Germany (East)	22
Germany (West)	23
Great Britain	24
Greece	25
Guatemala	26
Hong Kong	27
Hungary	28
India	29
Indonesia	30
Ireland	31
Israel	32
Italy	33
Jamaica	34
Japan	35
Korea (Rep.)	37
Malaysia	39
Mexico	40
Netherlands	41
New Zealand	42
Norway	44
Pakistan	45
Panama	46
Peru	47
Philippines	48
Poland	49
Portugal	50
Salvador	51
Singapore	52
South Africa	53
Spain	54
Sweden	55
Switzerland	56
Taiwan	57
Thailand	59
Trinidad	60
Turkey	61
USA	62
Uruguay	64
Venezuela	65
Yugoslavia	66
Zimbabwe	68