

Essay

The Economic Argument for a Policy of Suicide Prevention

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Abstract: The purpose of this paper is to demonstrate, using some conventional concepts and procedures from the discipline of economics, the economic rationale for governments to have suicide prevention policies. This is a conceptual paper, which proceeds in a theoretical fashion. The part of the economics literature that is relevant to this task is welfare (or normative) economics, not positive or empirical economics. Welfare economics is that part of economics which is concerned with evaluating whether some change in the human environment (economic, social, political etc) has increased social welfare. The motivation of this paper is to show that a suicide prevention policy involves a legitimate role of government, given the conventional framework of welfare economics. It may seem puzzling to suicidologists that it is necessary to argue an economic case for suicide prevention, given that suicide prevention seems established in contemporary civil society. That it is ‘well-established’ is a view that does not always apply ‘outside the circle’ of suicidology. The case for policy is dubious amongst some with a contemporary concern for environmental degradation. This argument is that a *laissez-faire* approach to suicide is appropriate in order to protect the planet. This paper shows that there is no economic case for a ‘no policy’ stance with respect to suicide prevention.

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It is well-known that suicide rates in various western countries have, in the recent past, been rising, and that governments in a number of countries have developed suicide prevention policies in response. Furthermore it has been pointed out by, *inter alia*, Cutler, Glaeser, & Norberg (2001) that these increases have been concentrated among the young. Details of governmental concerns have been outlined in various publications, for example, Department of Health (2000) for England, Commonwealth Department of Human Services and Health (1995)

for Australia, US Public Health Service (1999) for the United States, etc.

At a 2006 Health Economics conference in London, some joint-authored work on suicide (Doessel, Williams, & Robertson, 2010), was subject to some heated criticism on conservation grounds by a conference participant. Although the paper was concerned with suicide measurement issues, particularly discussion of two measures of suicide enumeration and the calculation of time-series statistics on the distribution of suicide (*per se*), there were some prefatory remarks about suicide prevention policies. It was briefly argued that such policies were appropriate and justified in terms of general economic theory. It was this general argument justifying a suicide prevention policy that the conference participant found objectionable.

By implication, this same argument can be levelled against the activities of all clinicians who work in the field of suicide prevention and self-harm. For such clinicians the aim is clearly

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prevention; Shneidman (1996, p. 7) writes as follows: 'Our constant goal is prevention.' See also Joiner (2005, p. 223) who writes of his 'agenda of prevention and relief of suffering'.

The motivation of our investigation, into whether or not an economic case for a suicide prevention policy exists, arose from this short exchange during that conference discussion session (and upon which we elaborate shortly). This audience-member presented a line of argument, *viz.* that suicide prevention conflicts with Gaia-based views, also elaborated shortly. In this introductory paragraph, the point simply is to say, by way of preamble, that his argument caused us to puzzle over his stance: does 'being Green' mean one supports the lack of a suicide prevention policy? The implication of his idea is that apathy in government towards suicide prevention policy is appropriate. Not convinced by this argument (a stance that this paper proves can be legitimate), the rationale here extends further, and beyond its original motivation relating to 'Gaia-type' stances. In its broader rationale, the paper demonstrates the appropriate approach to be taken to refuting any argument supporting apathy towards suicide prevention policy, or resignation towards the increasing trend in suicide. Being apathetic towards suicide prevention is, sadly, commonplace. Our argument here, based on conventional welfare economics, clearly demonstrates there to be a legitimate economic role of government in implementing effective suicide prevention policy. In the Discussion section below, we explain (to suicidologists in particular) why there is a need for this paper in the first place. We address a need here that may seem unnecessary to scholars of suicidology, and yet is not an argument that is necessarily obvious to all.

Suicide versus Carbon Footprints, and the Role of Economics

The conference participant argued that governments should have no policy on suicide: suicide was to be (literally) a *laissez-faire* issue on which government should be silent, and non-interventionist. It was argued that it was now well-known that all people have 'carbon footprints', a concept derived from the 'ecological footprint'. For some details, see Wackernagel & Rees (1996), Chambers, Simmons, & Wackernagel (2000) and Wackernagel *et al.* (2002). Advocates of these concepts are concerned with measuring the impact of human activities on the physical environment (and several internet sites on the Web enable site users to ply a carbon calculator with details of one's daily activities to determine one's 'footprint'). In a 'carbon footprints' conception, particular attention is directed to the quantities of greenhouse gases

produced by our daily activities such as the use of electricity, fuels for heating and transport etc. This ecological concern, it was argued, is derived from the 'Gaia hypothesis', as stated, for example, in Lovelock's (1995) book, *Gaia: A new look at life on earth*, first published in 1979. Lovelock's view is that 'the living earth' functions as a single organism, and that there is a self-regulating system (Gaia) which involves physical, chemical, biological (including 'human') phenomena. This system has a goal, namely 'the regulation of surface conditions so as always to be as favourable as possible for contemporary life' (Lovelock, 2006, p. 162).

Since his early 'Gaia' publications in the 1970s, Lovelock's views have changed, and more recently, in his *Revenge of Gaia*, he has argued that humans, by such activities as reducing biodiversity and clearing forests, have damaged Gaia's ability to self-regulate and regenerate the earth (Lovelock, 2006). His more pessimistic view is a result of mankind's continuing neglect of the environmental effects of current human behaviour.

It is not our purpose here to critique the Gaia hypothesis: there are many such critiques, from, *inter alia*, Richard Dawkins (1982) and Stephen Jay Gould (1997). (In some circles, exception is taken to regarding or describing Lovelock's arguments as a 'hypothesis', as in the previous sentence: for some it is a 'law', and for others it is a teleology.) Our purpose is simply to report that this concept was the source of the view that suicide should not be prevented: if people wished to end their lives, then that was up to them, and, as a result, mother earth would be subject to fewer environmental pressures, given their decisions. Thus, a Gaia-type concern leads to the view, for our conference participant, that there is no economic role for government to have a suicide prevention strategy. For this participant the use of economic resources by government to prevent suicide is inappropriate.

This paper is concerned with elaborating the view that a suicide prevention strategy is a legitimate economic policy for governments to pursue. Thus, the paper is concerned with the discrete choice between 'there is to be a policy' or 'there is to be no policy'. As a result, the paper does not even allude to issues such as the content of suicide prevention, including 'universal', 'selective' or 'indicated' programs, using the framework suggested by Gordon (1983). More detailed frameworks such as those of Mzarek and Haggerty (1994), Raphael (2000) and the LIFE conception (Australian Department of Health and Ageing, 2008) are also absent. Absent also is the application of economic and health-related literatures such as

the ‘capabilities’ approach of Sen (1985), Nussbaum & Sen (1993) and the more recent ‘human flourishing’ approach of Ruger (2009). The literature on prevention, and the more general economics and health-related literatures, are relevant to ‘within-policy’ choices that arise once it is established that there will be a policy. Such literatures as those just mentioned can guide policy content. But this paper addresses the prior economic question: ‘should there be a policy on suicide prevention?’ The literatures just mentioned are not germane to this discrete question.

In this context it is relevant to clarify the part of economic theory that is being considered here: economic analyses can be separated into two types, empirical or descriptive analyses, and normative or prescriptive work. (The first category is often referred to as ‘positive economics’ and the latter category as ‘welfare economics’.) In other words, economic analysis can describe the economic world or prescribe for it. Although positive economics can provide an important component for normative analysis, work with a focus on policy generally fits within the second category. In this context it is useful to recall Mishan’s statement on the role of welfare economics: ‘normative or welfare economics can be defined as the study of criteria for ranking alternative economic situations on the scale of better or worse’ (Mishan, 1981, p. 3). Similarly another much-quoted definition also highlights policy choice as the central characteristic of normative economics: ‘Welfare economics is the theory of how and by what criteria economists and policy makers make or ought to make their choices between alternative policies’ (Arrow & Scitovsky, 1969, p. 1). The ‘alternative economic situations’ or ‘alternative policies’ that are relevant to this paper are to have a suicide prevention policy (thus using public or private resources for this objective), or not to have such a policy, and having no resources allocated to the objective.

This paper will employ the conventional analytic and algebraic tools of welfare economics (Baumol & Wilson, 2001) in order to demonstrate that effective suicide prevention raises social welfare, and hence such a policy is justified. It will be argued below that this is an issue that invokes, not empirical economics, but that branch of economics which is concerned with what should be done by government, i.e. normative or welfare economics.

An Analysis from Welfare Economics

It is useful to observe that there are some areas of study, e.g. astronomy, physics etc, where the concern is to understand the phenomena in

question, in part to predict events. Thus, a normative branch of the relevant discipline does not exist. (This does not imply that ethical critiques do not exist: see Pringle & Spiegelman (1982) for a critical account of the nuclear industry, a by-product of theoretical physics. But the point is that such a critique is not ‘within’ physics.)

But economics is not like that: in the history of the discipline, issues of ‘what should be done’ were central to the concerns of the ‘founding fathers’, not simply in the English-language literature but also in literatures from continental Europe. See, in particular, the Scandinavian and Italian contributions to public finance (Musgrave & Peacock, 1958) and the Italian literature on public happiness (*pubblica felicità*) and civic virtues, such as public trust (*fede pubblica*). See Bruni (2006) for details. Some examples of historical policy issues were free trade *vs* protection, the desirability of accumulating and preserving stocks of a country’s precious metals, e.g. gold and silver, as a policy objective as advocated by the Mercantilists; a disproportionate emphasis on a single industry, agriculture, a policy prescription of the Physiocrats; the German romantics, e.g. Muller, arguing for the exemption of land and its produce from taxation, etc.

The historical term for these early contributions to economics is ‘political economy’. The part of contemporary economics that continues these policy concerns about ‘what should be done’ is now called welfare, or normative, economics. (The state of positive economics, i.e. testing hypotheses or economic models of economic behaviour etc, was at that time embryonic.) However, contemporary economic problems are somewhat different from those mentioned above. Some that come to mind are as follows: whether government should subsidise the production of cars with hybrid engines; whether country *X* should join the customs union, now called the European Union; whether investment in a new railway line is economically viable; whether we should conserve places of natural beauty, and how much should be preserved, etc. These are ultimately political questions, but insofar as they are subjected to economic analysis, the relevant literature that is applicable is welfare economics. Attention is directed here to applying some relevant parts of welfare economics to the topic which is under examination here, i.e. is a suicide prevention program a legitimate function of government policy?

Let us recognise that not all people share a concern for suicide prevention: some admire the suicides of honour, love, idealism, epitomised historically by the acts of Cleomenes, Hippo,

Seneca, Lucretia, Brutus, Pythagoras etc (Minois, 1999). Yet again, there is the concept of the absurd in existentialist thought that, for some existentialist writers, leads to suicide being regarded as quite understandable: as there is no purpose, value or meaning in the world or to life, suicide is an understandable response. See Orbach (2007). But, for Camus, although suicide was the 'one truly serious philosophical problem' (Camus, 1955 p. 3-4), his disposition was to struggle and revolt against the absurd (Camus, 1960). Rebellion, for Camus, implies dissatisfaction with the human condition, i.e. one needs to face the absurd, and make a decision in favour of life. See Lengers (1994) for a discussion of Camus' perspective for the role of health professionals. Camus, it must be said, was in conflict with some of the major French writers (including Sartre, who at the time was justifying Stalinism), following the publication of *The Rebel* with its anti-totalitarian theme. In fact, Camus had been ostracised by the 'left-bank intellectuals' of Paris. Lenzini, a recent biographer of Camus, writes as follows: 'He would remain an outsider in this world of letters, confined to existential purgatory... He was not part of it. He never would be. And they would never miss the chance to let him know that' (Lenzini, 2009, p. 76). But this is a digression: public policy, in large part, is oblivious to these types of arguments.

Let us now begin by restating the central points of the first paragraph of this paper. Suicide as a cause of death is increasing in many countries and is being identified by many governments as a social problem. In response, some governments have adopted policies concerned with addressing suicide through preventive action. This implies an inverse relationship between community welfare and suicide. The impact of suicide upon society can be measured by the reduction in the length of life, or longevity, that results from an act of suicide. Furthermore, politicians and bureaucrats say that it is a greater tragedy when young people take their own lives. Thus community welfare falls even more when the young take their own lives.

One way of describing the points made in the paragraph above is to say that the (partial) social welfare function (W_1) has two arguments, *viz.* the total social loss from suicide, and the distribution of age-at-death from suicide. Thus,

$$W_1 = f(SLfS, I_s/E_s) \quad (1)$$

where $SLfS$ is the social loss from suicide, and I_s/E_s is the notation for 'inequality/equality' in the distribution of age-at-death from suicide. (We work with a partial social welfare function, i.e. abstracting from goods and services consumed (for

the moment), as well as the non-economic determinants of welfare as outlined by Bergson (1938), as these variables will simply 'clutter' the exposition.) Goods and services will be incorporated below. Also, it will be shown that equation (1) is partial in that it takes no account of time.

Before proceeding to issues of measurement of the two variables in (1), as outlined in Doessel *et al.* (2010), it is relevant to place these concerns in the wider framework of welfare economics.

A conventional approach in welfare economics is to specify social welfare (W) as an (undefined) function of the utility levels of the n individuals who comprise the community. Thus we may write:

$$W = f(U_1, U_2, \dots, U_n) \quad (2)$$

where U_i is the utility level of person i , where $i = 1, 2, \dots, n$. (It is not necessary in this context to specify any relationship, say the additive form of the Cambridge School, between the U_i in equation (1).) There are some very important value judgements associated with equation (2), as elaborated by Nath (1969). However, these value judgements are not central to this paper and will not be considered.

Dissatisfaction with such a social welfare function, equation (2), arose during the debate on welfare criteria initiated by Kaldor (1939), and was quickly followed by contributions from Hicks (1940) and Scitovsky (1941). Some parts of this literature are quite abstract (and employ some standard welfare concepts such as commodity space, utility space, the community indifference map, the situation utility-possibility curve etc: thus some of the arguments require some technical understanding of welfare economics). Given the abstract nature of some of the content, it is useful to give some examples of what the literature was considering. At the very beginning of the welfare criteria debate, the policy issue of repeal of the (British) Corn Laws by the Peel government in 1846 was considered. This issue is a manifestation of the free trade *vs* protection debate. Abolition of the tax (a tariff) on grain imports to Britain would have the effect of making some people worse off (the owners of British agricultural land, who had been receiving super-normal profits because the tariff had increased domestic grain prices.) On the other hand, abolition would make another group better off, i.e. British consumers of grains (bread etc) who would benefit from lower prices. This is a straightforward case of welfare changes between

producers and consumers. The ultimate policy question was as follows: was repeal of the Corn Laws (decreasing tariffs on imports of grains to Britain) ‘a good thing’?

However it may be helpful to mention some more contemporary policy changes. Consider a government contemplating the construction of a new freeway from the central business district of a well-established city to outlying suburbs. Such a change in the economic environment will make some people better off (commuters etc) and some worse off, e.g. people whose properties are resumed (often at less than market prices because of the eminent domain power of government), as well as the remaining residents who are now subject to noise pollution. A little reflection indicates that there are likely to be few changes such that no one in society is made worse off.

The welfare criteria debate started with Kaldor’s argument that a policy change (on tariffs, a freeway etc) was desirable (on economic efficiency grounds) if some of the gains to the gainers could be used to compensate the losers for their losses, and hence everyone could be made better off. For Kaldor, this compensation test (also called the compensation ‘principle’ or ‘criterion’) was an objective test of economic efficiency, and policy prescriptions based on it were ‘scientific’, in that they were devoid of any value judgement. It should be emphasised that Kaldor did not require that compensation be paid: whether hypothetical compensation became actual compensation was a political question, not an economic question.

What Kaldor, and later Hicks (1940), were doing was using compensation as a conceptual ‘wedge’ (or a sharp conceptual distinction) between efficiency and distribution, which effectively swept distribution out of view. Leaving aside Scitovsky’s (1941) ‘paradox’ paper, which is not relevant in this present context, the next contribution was from Little (1949), whose arguments were subsequently elaborated in Little (1957). Little argued forcefully that value judgements (particularly about distribution) are central to welfare economics and cannot be avoided or swept out of sight. Furthermore those value judgements should not be hidden or suppressed, but should be stated explicitly, and arguments given for their adoption. But if the value judgements underlying the compensation test are clearly stated, the policy may find little public support. As compensation does not have to be paid, the test is consistent with making the poor poorer. It was Little’s argument that Kaldor, Hicks *et al.* were being misleading by their use of persuasive terms (e.g. ‘increase in wealth’, ‘economic efficiency’ etc). They had separated ‘efficiency’ and ‘distribution’ only by ignoring the

latter. The search for a value-free criterion of ‘an improvement in economic welfare’ was futile. This ‘tortuous debate’, to use Mishan’s (1969) phrase, in the theoretical literature culminated in what is now called Little’s criterion.

Little’s position was that distribution must be recognised as a relevant variable: is there a better distribution associated with the post-policy outcome compared with the distributive position of the pre-policy position? Clearly, the answer to this question involves a normative judgement.

Thus, following Little, we may write

$$W = f(U_1, U_2, \dots, U_n; I_U/E_U) \quad (3)$$

where equation (2) is augmented by I_U/E_U , some measure of the distribution of utility (or welfare) between the members of the community, the point that had been so forcefully made by Little. Distributional effects of any economic change must be incorporated into the analysis.

These theoretical distributional matters received some considerable attention in the applied literature on social investment appraisal, where a number of different empirical approaches were developed to incorporate income or wealth distribution in cost-benefit analyses.

The Little criterion involves both the provision of efficiency information and distributional information to decision-makers. Marglin (1962) then suggested that planners/economists should aim to present information to decision-makers which maximises ‘a weighted sum of redistribution and efficiency’. Weisbrod devised a way of implementing Marglin’s suggestion by inferring distributional weights from previous governmental decisions: his procedure involves the simultaneous solution to a system of equations (Weisbrod, 1968). Neenan (1971) then applied this technique in his analysis of an X-ray screening programme to detect tuberculosis.

Another approach to integrating efficiency and equity, first suggested by Eckstein (1961), is to infer distributional weights from a situation in which redistributive issues are at the forefront of attention: the personal income tax legislation (in western countries) is such a case. Mera (1969) devised a procedure to do this and Nwaneri (1970) applied the technique in re-working the Roskill analysis of the (then proposed) Third London Airport. Using the Australian income tax schedule, Doessel (1978) applied this procedure in his cost-benefit study of four alternative methods of treating end-stage renal disease.

It is now not atypical to see welfare functions such as that indicated in equation (3) in the theoretical literature. Graaff's argument is that there is a need to 'dispense with the time-honoured device of drawing a distinction between the size and the distribution of national income and saying that welfare depends on them both' (Graaff, 1967). This statement is reminiscent of Little's critique of Kaldor: '[Kaldor] suggested not a test, but a definition, which certainly separated out income distribution, but only by ignoring it... We do not believe that any definition of an increase in wealth, welfare, efficiency, or real social income which excludes income distribution is acceptable' (Little, 1957, p. 92). See also Fischer (1956), Sheshinski (1972) and Fields (1979). More recently, Sen (1976) has re-argued the case for incorporating distribution in (generally) standard-of-living comparisons. He argues that the welfare theory of real national income comparisons is deficient particularly with respect to income distribution. His procedure is to weight goods to different people by distributional judgements. Thus, a concern for I_U/E_U in the welfare function now has many precedents.

As yet we have not specified the content of the utility function, U_i , the components of equations (2) and (3). It is conventional to say that the arguments in U_i are goods/services consumed. Thus

$$U_i = f(X_i, Y_i) \quad (4)$$

where X_i is the amount good x consumed by person i , and Y_i is the amount of good y consumed by person i , and given that,

$$X = \sum X_i \text{ and } Y = \sum Y_i,$$

where X and Y are the totals of goods x and y for the community. Thus, equation (3) can be re-written as

$$W = f(X, Y; I_U/E_U) \quad (3a)$$

Note that equations (3) and (3a) are timeless.

Although the importance of time has been recognised in economics in the context of investment appraisal since Fisher (1930), it was not until 1965, with the publication of 'A Theory of the Allocation of Time' by Becker (1965), that time was incorporated into the body of microeconomics. One of Becker's key points was that the consumption of goods actually takes time: this is clearly recognised in the context of attending the

theatre for a musical concert, a play or a film, having a restaurant meal etc: recognition of the jointness of consumption of goods and time leads quickly to the concept of a time-price associated with the money-price of the consumption of a good. In the health sector this has led to the calculation of time-prices associated with the consumption of health care services, the first study being that of Acton (1975).

It is relevant to observe that this jointness between the consumption of goods and time is not simply restricted to particular consumption goods, but is applicable to all consumption goods. If we consider the conventional utility function in equation (4), it is clear that this function takes no account of the jointness discussed above. One way to recognise this is to re-write equation (4) as follows:

$$U_i = f(X_i, Y_i; t_x, t_y) \quad (5)$$

where t_x and t_y are the time periods associated with the consumption of X_i and Y_i . It is important to note that this equation is exactly the same as Becker's (1965) equation (4), with the exception of notation.

In equation (5), it is recognised that time (associated with consumption) is an argument in the utility function for person i . Summing across n persons, we have total time (T) as follows:

$$T = \sum_{i=1}^n t_x, t_y$$

It is also useful to state the following identity:

$$T = \sum_{i=1}^n t_i$$

where t_i is the length of life of person i .

Given that time enters the utility function, there is but a small step to recognise that time also enters the social welfare function (W). Thus we may re-write equation (3a) as follows:

$$W = f(X, Y; I_U/E_U; T) \quad (3b)$$

It is conventionally, and uncontroversially, assumed that W is increasing in X and Y : given that T is jointly involved with X and Y , it follows that W is also increasing in T . Thus the period of time during which consumption is available, i.e. the total period of life of the members of the community, is also an argument in the social welfare function and

increases W . Thus, the longevity of the community's members is a variable which contributes to social welfare.

It follows from equation (3b) that death from any cause (including suicide) will decrease the value of the social welfare function (W). Given that inequality/equality (associated with goods) is an argument in the welfare function, and that people jointly combine goods and time, it follows that the distribution of time is also a component of W . Thus we may write:

$$W = f(X, Y; I_U/E_U; T; I_T/E_T) \quad (3c)$$

Let us now return to equation (1), a statement of government concern for the social loss from suicide and its distribution. This equation was described as a partial social welfare function. Given that time (and its distribution), have now been shown, as in equation (3c), to be arguments in the general social welfare function, the statement of W_1 in equation (1), can be seen to be a part of W in equation (3c). In other words, a concern for suicide (and its distribution) can be regarded as part of the general body of welfare economics.

Thus, extensions of modern welfare economics provide a justification for time, i.e. length of life or longevity, to enter the social welfare function. The approach for detecting whether a societal intervention (such as a prevention policy) has had an impact on suicide involves examining suicide data. It has been argued elsewhere (Doessel, Williams & Whiteford, 2009a; Doessel, Williams & Whiteford 2009b) that the appropriate measure for detecting the efficacy of a societal intervention is not headcount measures (conventional mortality data), but the years of unlivable lifetime due to suicide, as measured by the Potential Years of Life Lost (PYLL), a measure first advocated by Dempsey (1947). Such data in time-series form provide the material that allows analyses of the statistical location, or quantity, of suicide and its distribution (Doessel, Williams & Robertson, 2010).

The result of this welfare economic analysis is that a concern for suicide and its prevention can be incorporated into the conventional/traditional discourse of welfare economics. This result is of particular relevance and importance in this present era: arguments (based on the contemporary concern for environmental degradation) proposing that a *laissez-faire* approach to suicide is appropriate, are shown here to have no basis in conventional welfare economics.

Debating and developing effective suicide prevention policy is an important step in the

formation of policy that prevents suicide. Various assumptions in terms of social welfare that underlie empirical economic research are relevant to such debates. These assumptions are made explicit by a methodological type of study such as this. The study therefore advances the usefulness of the empirical information, which can be made available to policy makers, for effective suicide prevention policy. Effective policy will raise social (community) welfare, both in terms of the quantity of life lived in a nation, and the distribution of that life lived.

Discussion

Approbation or condemnation of suicide, also called at various times self-murder and voluntary death, has a long history in human affairs, from (at least) the classical heritage of Greece and Rome (Minois, 1999). However, government-funded suicide prevention policies are of much more recent origin. This paper is a reaction, or response, to an argument, not for suicide *per se*, but against governments having a policy to prevent suicide.

The argument presented here is that the application of concepts central to conventional welfare economics provides a clear economic justification for governments to adopt suicide prevention programs. It has been pointed out previously that this paper, quite deliberately, does not even allude to issues that can be considered within suicide prevention programs. Researchers who till the field of suicide research and prevention may even be surprised at the content of this paper, and implicitly may have assumed that funding research into effective suicide prevention is 'a good thing', and thus 'an obvious case' for public financing. This implicit assumption also applies to the provision of suicide-related clinical services: for service providers, there may seem no need to justify their existence and/or activity. Whilst, for some, the need for this paper may seem surprising or even unnecessary, this paper indicates that such a view is too sanguine in the current climate of community attitudes. There are those for whom financing suicide prevention services and research into effective practice and policy is not obvious; there are those for whom the place for such a policy is not uncontroversial. Thus, this paper may fill a 'gap' in the suicidology literature in that it addresses an issue that many suicidologists may not even have realised existed.

Note that this argument against government-funded prevention strategies is equally applicable to the preventive role of clinicians who work with suicidal and self-harming people. This anti-suicide prevention argument has been

motivated, not by any argument about abrogating people's right to make choices over all their life decisions (including their own existence), but by relatively contemporary concerns about environmental degradation arising from human actions of various kinds. Those concerns, it has been argued, lead to the conclusion that suicide should not be prevented, in pursuing the cause of the long-term survival of the planet.

Suicide prevention policy can be approached along a spectrum of 'no government action' towards increasing levels of government preventive strategies. Various groups in society benefit from the position adopted along this spectrum, and differing policies affect groups of people to varying degrees (i.e. groups characterised by age, gender, diagnosis etc). There are important welfare implications behind trends in suicide, and also behind strategies designed to reduce suicide. However, this paper has not been concerned with these important issues: rather our concern has been to address the issue of whether economic resources (for a prevention program and clinical services for at-risk people) are justifiably applied by government.

In this context, it is valuable to employ the analytical tools of welfare economics in order to demonstrate that effective suicide prevention raises social welfare. It has been shown here that resources spent on suicide prevention strategies should raise social welfare, and thus a suicide prevention policy is appropriate for government. That conclusion has been reached by recourse to conceptual arguments at the core of modern welfare economics.

This conclusion is important, as it is contrary to a currently fashionable concern for alleviating environmental degradation. Although it can be argued that the number of suicides, being relatively low, will have a negligible impact on the planet's environmental status, we have deliberately chosen not to argue on such an empirical basis. Rather, we have chosen to address this challenge to suicide prevention at a conceptual level, using the tools of modern welfare economics: it is clear that there is a conflict between this conclusion derived from conventional welfare economics and the Gaia-inspired environmental conservation conclusion.

The environmental conservation arguments outlined at the beginning of this paper, which propose that there is no place for such a policy, do not even allude to the concepts from conventional welfare economics applied here. We note in passing that welfare economics is people-focussed, i.e. the concern is for the people who comprise the community, as manifested in equation (2) etc. It is

not unreasonable to expect that proponents of conservationist views, should they wish to argue against the use of resources for suicide prevention, do so by addressing the evidence for suicide prevention that conventional welfare economics produces.

Thus, the purpose of this paper has been served, by outlining the case which refutes the view that governments should not allocate taxpayers' resources to the prevention of suicide. Although environmental concerns are currently 'popular', and 'politically correct', when the environmental argument against suicide prevention is placed in the framework of conventional welfare economics, that argument is shown to be deficient. In other words, this Gaia-derived argument is at odds with conventional welfare economics.

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