

# *Operationalising Memetics - Suicide, the Werther Effect, and the work of David P. Phillips*

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## Abstract

One of the major challenges currently facing memetics is the issue of how to successfully *operationalise* the emerging paradigm. In other words, how can we exploit the innovative analytical framework of memetics in order to generate a body of theoretically informed empirical research? Whilst there are some important *theoretical* issues that have yet to be resolved, the future success of memetics, qua academic discipline, may depend not so much on elaborate theoretical developments, but on the results of *empirical* research findings. Operationalising memetics will not only involve subjecting memetic theory *itself* to empirical testing, but it will also mean assessing the usefulness of the paradigm in describing, understanding and explaining the sociocultural patterns and phenomena that are the *traditional foci of the social sciences*. To this end, the following paper will explore the operationalisation of memetics by reviewing the work of the David P. Phillips, a sociologist who has been publishing empirical research on social contagions since 1974. Although Phillips has not explicitly referred to memetics, it will be suggested that a number of practical lessons and guidelines may be drawn from his research, and a possible outline for operationalising memetics will be proposed based on his approach.

Summary of empirical research on social contagions conducted by Phillips

<b>The Werther Effect: Fact or Fiction - Summary of Research by D.P. Phillips</b>	
Key findings and Conclusion	Source
SS Suicide rates increased significantly after suicide stories were reported newspaper stories. The increase was proportional to the amount of newspaper coverage devoted to the suicide stories	American Sociological Review 1974 Vol. 39:340-54
SS Car accident fatalities increased following media representations of suicide implying that some car accident fatalities were in fact imitative suicides	Science 1977 196: 1464-65
SS Car accident fatalities, particularly those resulting from single-car accidents increased significantly three days after a suicide story was publicised in the newspaper press. The increase was proportional to the intensity of the publicity, and the age of the accident victim was positively correlated with the age of the suicide story victim. There was also a	American Journal of Sociology 1979 Vol.

corresponding correlation between murder-suicide stories and multiple car crashes involving passenger deaths.	84 No.5: 1150 -1174
SS Publicised murder-suicides were followed by an increase in aeroplane crashes (airline and non-commercial). The increase in aeroplane crashes was proportional to the degree of coverage that these stories received	Social Forces 1980 Vol. 58 (Jun): 1001- 1024
SS Daily US suicide rates increased significantly (for a period of less than ten days) following the appearance of highly publicised suicide stories on television evening news programmes.	American Sociological Review 1982 Vol. 47: 802- 809
SS Suicide rates, motor vehicle fatality statistics and non-fatal accidents all rose immediately following the transmission of fictional televised suicide stories in 1977	American Journal of Sociology 1982 Vol. 87 No. 6: 1340-1359
SS Homicides in the US increased following heavyweight championship prize-fights in a relationship that persisted after correction for secular trends, seasonal and other extraneous variables. The increase was found to be largest following heavily publicised fights.	American Sociological Review 1983 Vol. 48 (Aug): 560-568
SS Between 1973 and 1979 teenage suicides increased significantly following 38 nationally televised stories of suicide. The intensity of publicity devoted to the suicide stories was significantly correlated to its effect on teenage suicide rates	New England Journal of Medicine 1986 Vol. 315 No.11: 685-9

**"No fact is more readily transmissible by contagion than suicide."**

**Emile Durkheim (Le Suicide [1897] 1951:141)**

In the mid-1770s a peculiar clothing fashion swept across Europe. For no immediately apparent reason, young men started dressing in yellow trousers, blue jackets and open-necked shirts. This mildly eccentric fashion spread from region to region in a manner strangely similar to the epidemics that were continuing to plague the Old Continent. It turned out that these 18th century fashion victims all had one thing in common; they had all been exposed to first novel of Johann Wolfgang von Goethe, *The Sorrows of Young Werther*. Goethe's novel recounted the desperate plight of Werther, a young man hopelessly in love with a happily married woman called Charlotte. In this intense and romantic tale, Goethe describes Werther's rather peculiar penchant for wearing a colourful mélange of blue jackets, yellow trousers and open-necked shirts.

Shortly after being published in 1774, Goethe's novel was banned in several areas across Europe. This was not because certain authorities held it responsible for the spread of a fashion of rather doubtful taste, but because there were signs that the book was also the vector for an altogether more serious contagion. The tale recounted how Werther's clumsy, but painfully sincere, attempts at winning Charlotte's heart ultimately failed. Destroyed by rejection, Werther saw no way out of his desperate plight other than suicide, and using a pistol, he dramatically put an end to his sorrows.

For a memeticist, the social consequences of the publication of Werther's tragic story are entirely predictable: Not only was Werther's dress code the object of imitation but so was his somewhat extreme code of behaviour. Anxious authorities around Europe received reports of increasing numbers of young men imitating Werther's desperate act. Goethe himself became convinced that his tale was responsible for a continental wave of suicides.

"My...friends thought that they must transform poetry into reality, imitate a novel like this in real life and, in any case, shoot themselves; and what occurred at first among a few took place later among the general public..." (Goethe quoted in Phillips 1974:340)

In an attempt to prevent the suicides from reaching epidemic proportions, a number of authorities banned *The Sorrows of Young Werther* in the hope that the imitative behaviour would cease.

Two hundred years later, in 1974, the sociologist David Phillips coined the term "the Werther effect" to describe imitative suicidal behaviour transmitted via the mass media. Phillips devised an empirical research programme to establish whether media reporting of suicide stories really did affect suicide rates. In over a decade of research, Phillips produced important evidence that supported the hypothesis that behavioural patterns in society can in fact operate as contagions. Methodologically speaking, Phillips' research was interesting because it described one possible solution to the general problem of operationalising the memetic paradigm which, to date, has been dominated by anecdotal evidence.

Phillips' methodological approach could be described as *quasi-experimental* in that his analysis was based on an experimental protocol, but he worked with exclusively historical data sourced in the real, uncontrolled, world. Using newspaper records and official suicide statistics, he identified a number of 'control periods' defined by the absence of front-page newspaper suicide stories. Using the suicide statistics from these control periods, he generated a number of expected suicide rates for a pre-defined selection of 'experimental periods' during which front-page suicide stories were published. Working with a null hypothesis that the front-page newspaper reporting of suicide stories had no effect on aggregate suicide rates, he compared the expected rates with the actual rates. After controlling for seasonal and other spurious effects, Phillips tested for significance between the two values, and by comparing a number of different experimental periods, he was able to test for a correlation between suicide rates and the intensity of media representations.

Phillips' technique was unusual in that other experiments on imitation and the mass media have tended to be conducted under artificial laboratory conditions. Whilst some of these experiments have yielded results that point to a correlation between media representations and imitative behaviour (e.g. Bandura, Ross and Ross 1963), they have been largely discounted for failing to accurately replicate the conditions and environment under which memes are transmitted in the heterogeneous and multifaceted social world.

The results of Phillips' quasi-experimental research could not be subjected to this "non-relevance" argument precisely because he was testing for a correlation between media representations and actual social behaviour *in* the social world. Importantly, Phillips was not testing for the relationship between individual behaviour and media representations, rather he was testing for a relationship between suicide rates and media representations. Put differently, Phillips was attempting to provide an explanation of

social facts (suicide rates and media representation levels) through social forces (imitation) mediated via the communication infrastructure of society. Such a macro-level of analysis is of important theoretical significance to memetics since it adds a structural element to a theory otherwise open to the charge of methodological individualism. Severe limitations on space preclude the development of this more theoretical tangent, but it is important to recognise that Phillips was testing for the replication of structural patterns in society rather than investigating the individual process of replication/transmission per se. In this way, his approach is an example of what might usefully be called macro-memetics, in contradistinction to the equally valid micro-memetic approach that currently dominates our paradigm.

Following Phillips' research protocol, such a macro-memetic analysis can be broken down into a certain number of stages that together might outline a possible method for investigating the structural epidemiology of memes:

1. Define the phenotypical expression/symptomatology that will be used to measure levels of meme infection (suicide)
2. Measure the prevalence of meme infection over time within a given population (suicide rates)
3. Measure the exposure rate within a population to this meme through a particular (mass) medium over time (circulation/viewing figures)
4. Calculate an index of exposure intensity (exposure level multiplied by the share of total medium content (column length/no. of days on front page))
5. Define a series of control periods where media transmission intensity = 0
6. Define an experimental period where media transmission intensity > 0
7. Regress meme infection levels during control period(s) to generate an expectation for the experimental period based on the null hypothesis that media representations of the meme have no effect on the incidence or prevalence of that meme
8. Test for significance between the expected and actual results
9. If expected and actual results are significantly different, test for further relationships (host similarity/correlation of intensity and suicide rates)

### Figure 1: A New Approach for Memetics?

Such a research programme might yield results providing evidence to support the hypothesis that meme exposure partly determines the incidence and prevalence of meme infection. Put differently, Phillips' macro-memetic approach would help determine whether patterns of behaviour in society do in fact operate in a manner similar to that of contagions. This would provide the empirical foundations for the development of a fuller memetic account of behaviour, providing not only evidence for replication/transmission but also incorporating the processes of variation and selection. If it can be established that social facts may sometimes operate as contagions, meta-studies of the epidemiologies of various different traits and practices (symptoms of meme infection) might yield clues as to what it is that makes a social contagion infectious, and which factors influence immunity/susceptibility.<sup>[1]</sup> Further, it might then be possible to measure both the fidelity of sociocultural replication as well as the average

time-lapse between exposure and replication (the incubation period). Thus we could begin to generate results around a complete evolutionary loop of variation, selection and replication operating within the (infra) structure of various lines of communication. Mapped over time, structural lineages of mediated traits and practices could provide the basis for a memetic phylogeny of society. This would raise the interesting possibility of an innovative memetic typology of societies derived from the various modes, and relationship to the means, of cultural reproduction. Again, this is a theoretical theme that falls outside the scope of the paper, but such a typology might usefully draw on the social evolutionary theory developed by Jürgen Habermas (Habermas 1979).

Turning now to the empirical results of this 'macro-memetic' research Phillips has provided evidence to support the claim that suicide does indeed behave as a social contagion. Specifically, he demonstrated that exposure to suicide in media stories was a significant variable in accounting for UK and US suicide rates (Phillips 1974). He was also able to show that the intensity of meme transmission correlated positively with suicide rates. In a similar way, Phillips also correlated aeroplane and car accidents, murder and violent crime rates to mass media reporting. (Phillips 1977, 1979, 1980, 1982a, 1982b, 1983, 1986).

The implications of Phillips' research findings were radical; suicide appeared to behave as a contagion mediated via, and dependent upon, lines of mass communication.<sup>[2]</sup> However, despite consistent findings in favour of this replication/imitation thesis, the Werther effect has not been widely integrated into a comprehensive social scientific understanding of suicide. The reason for this is particularly relevant to memetics and thus merits a brief review.

There are certainly some important methodological problems in Phillips' research that could partly explain why replication/imitation is not a now central concept in contemporary suicide research. In interpreting the results, Phillips appears to make individual-level inferences from aggregate findings (ecological fallacy), he is uncritical of the reliability of official suicide statistics, and he completely ignores the key issues of definition, intention and performance (suicide as opposed to para-suicide (Platt 1984), suicidality (Thorlindsson and Bjarnason 1998), attempted suicide and more generally, risk taking behaviour (Taylor 1982)). These problems have led to an inevitable discounting of his findings in social scientific circles (e.g. Baron and Reiss 1985). The key lesson for memetics here is that it will be important for empirical research to take cognisance of, and address these issues of validity, reliability and meaning. The heterophenomenological approach adopted by Dennett (Dennett 1991) may go some way to address the problems of definition, intention and performance, and the problems of official statistics may be obviated by directly recording prevalence rates. However, the greatest problem for the replication/imitation thesis is theoretical; the Werther effect fundamentally undermines the still dominant Cartesian understanding of the human subject that underpins much social scientific explanation. Social contagions are fundamentally at odds with such an understanding that generally presupposes an irreducible source of intentionality and rationality (economic and cognitive) behind human behaviour. This homuncular understanding of the human subject is part of what Barkow et al. (1992) have called the Standard Social Scientific Model (SSSM), and its domain assumptions virtually preclude taking evidence of the Werther effect seriously. Whilst the SSSM might accommodate evidence to the effect that the media acts as gate-keeper and agenda setter in the process of communication, any evidence suggesting that we, *ourselves*, are emergent properties of this communication process, rather than vice versa, is incompatible with the 'dogma of the ghost in the machine' that still dominates social science. An alternative understanding of human consciousness, perhaps similar to Dennett's 'Multiple Drafts' functionalist model, will probably have to become firmly established in social science before memetics starts to be taken seriously. Put differently, until Cartesian materialism/dualism ceases to underpin social scientific explanation, the obvious parallel between Darwin and the Creationists will continue to run deep.

However, I do think that Phillips' research has highlighted a weakness in the SSSM, which might provide a more direct opportunity for the establishment of a memetic understanding of suicide and other social behaviour within "respectable social science". This opportunity lies in the very inability of the SSSM to account for the phenomenon of replication/imitation from within its own homuncular paradigm. The more concrete evidence that memetics can provide to support the hypothesis that traits and practices in society do evolve according to principles of variation, selection and replication/transmission, then the more, I believe, the SSSM will be subjected to an increasingly acute crisis of legitimation. This is why I believe the operationalisation of memetics is so crucial to the development of the paradigm.

Interestingly enough, the memetic challenge to the sociology of suicide does have an historical precedent, dating back a hundred years to the competing analytical frameworks of Gabriel Tarde (Tarde [1903] 1962) and Emile Durkheim (Durkheim [1897] 1952). However, Tarde's proto-memetic framework was largely abandoned by sociologists in favour of the approach proposed by Durkheim. In his seminal text, *Le Suicide*, Durkheim explicitly discounted the effects of imitation on suicide rates, arguing that any effect of imitation would be precipitative, minor, and local, and thus insignificant at aggregate level. Whilst the social scientific understanding of suicide has certainly evolved since Durkheim's time, theoretically informed research has tended to either develop out of his original regulation/integration thesis (e.g. Thorlindsson and Bjarnason, 1998), or limit itself to a largely interpretivist critique of his method (e.g. Douglas 1967). However more recently, *empirical* research has begun to include evidence on replication/imitation. This third approach, sometimes known as risk factor analysis, is characterised by the absence of any organising or explanatory principle (Hood-Williams 1996). More of a collection of statistical correlations between antecedent conditions and suicidality than a theory per se, risk factor analysis provides explanations for variations within and between populations that are couched in terms of differential exposure to risk factors (Charlton et al. 1993), *including social contagions*.

This theory-neutral territory is perhaps the ideal ground for developing a comprehensive memetic understanding of suicide. Recent research has tended to confirm the replication/imitation thesis, and has concerned itself with measuring the effects of this phenomenon (Gould et al. 1989 1990). Stack (1990), in a review of research results, concluded that the degree of suicide content in the mass media is indeed an important variable in accounting for varying suicide rates. Further research has been undertaken in order to demonstrate the circumstances under which the suicide contagion is particularly infectious (Stack, 1987, Bjarnason and Thorlindsson 1994). It is now generally accepted that a spatio-temporal clustering of imitative suicidal behaviour does occur, and that the Werther effect may account for a significant proportion of youth suicides in the US (Gould et al 1989). In consequence, a US Government endorsed programme on suicide contagion has now been set up to provide guidelines and recommendations for minimising the Werther effect,[\[3\]](#) and a similar Government project also exists in Australia.[\[4\]](#)

However, as critics of Phillips' research have pointed out (e.g. Baron and Reiss 1985:361), without a credible theory of contagion or imitation upon which hypotheses may be tested, quasi-experimental research findings, such as those of Phillips, may invite ex-post reinterpretations as to the nature and existence of these putative social contagions. This means that until a comprehensive theory of replication/imitation is developed, evidence will probably be simply ignored because it doesn't 'fit' the SSSM. This, of course, is where I believe the opportunity for memetics lies, through the *theoretically informed provision* of empirical evidence of contagion and imitation from an alternative non-homuncular paradigm.

The purpose of this paper has not been to develop a memetic theory of suicide, (a central task of my DPhil thesis) but to demonstrate the pertinence of Phillips' research for the memetic paradigm methodologically, empirically and politically. Health authorities, if not academia, already accept the

central tenet of our paradigm, and this important fact may provide memetics with a key opportunity for developing academic respectability and funding. A memetic approach, operationalised as *the epidemiology of social contagions in society* could build on research such as that conducted by Phillips, and could capitalise on the inability of current paradigms to adequately deal with the phenomenon of replication/imitation. Operationalising memetics as epidemiology suggests that one of the central tasks of our discipline may be to map the structural evolution and spread of social patterns of behaviour within society in terms of the familiar evolutionary loop of variation, selection, and replication. This macro-memetic approach could be complemented by, and conceptually integrated with, the micro-memetic analysis of differential infection as proposed by Lynch (1997) and Brodie (1996). These complementary approaches might provide the basis for a comprehensive analytical framework for generating a body of theoretically informed evidence relating to social contagions, which in turn might lay the foundations for the long overdue Kuhnian paradigm shift that will finally see the integration of social science within a broader evolutionary paradigm.

### *Notes and References*

[1] This research might perhaps draw on the research of McGuire (1964) who has developed an inoculation model in the social psychology of persuasion.

[2] Other researchers have subsequently adopted Phillips' quasi-experimental approach to demonstrate that other traits and practices may operate as social contagions transmitted via the mass media (e.g. Mazur 1982 on bomb threats)

[3] The suicide contagion thesis has impacted on public policy in the U.S. following a recent CDC (Center for Disease Control and Prevention) endorsed national workshop (CDC 1994).

[4] National Youth Suicide Prevention Strategy National Projects  
<http://www.health.gov.au/hsdd/mentalhe/nysps/projects/13.htm>

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