

The „Meta-Analytic Big Bang“ (Shadish & Lecy, 2015)

Eysenck's Verdict on Psychotherapy

- **1952:** famous British psychologist Hans Jürgen Eysenck publishes article claiming that psychotherapy (mostly psychoanalysis at that time) was ineffective.
- His conclusion: if patients get better during therapy, it is because their situation would have improved anyway due to factors that have nothing to do with the therapy.
- Even worse, Eysenck claimed, psychotherapy would often *hinder* patients from getting better!



The Effects of Psychotherapy: An Evaluation

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The recommendation of the Committee on Training in Clinical Psychology of the American Psychological Association regarding the training of clinical psychologists in the field of psychotherapy has been criticized by the writer in a series of papers [10, 11, 12]. Of the arguments presented in favor of the policy advocated by the Committee, the most cogent one is perhaps that which refers to the social need for the skills possessed by the psychotherapist. In view of the importance of the issues involved, it seemed worth while to examine the evidence relating to the actual effects of psychotherapy, in an attempt to seek clarification on a point of fact.

Base Line and Unit of Measurement

ter, he used the amelioration rate in state mental hospitals for patients diagnosed under the heading of "neuroses." As he points out:

There are several objections to the use of the consolidated amelioration rate . . . of the . . . state hospitals . . . as a base rate for spontaneous recovery. The fact that psychoneurotic cases are not usually committed to state hospitals unless in a very bad condition; the relatively small number of voluntary patients in the group; the fact that such patients do get some degree of psychotherapy especially in the reception hospitals; and the probably quite different economic, educational, and social status of the State Hospital group compared to the patients reported from each of the other hospitals—all argue against the acceptance of [this] figure . . . as a truly satisfactory base line, but in the absence of any other better figure this must serve [26, p. 168].

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Gene Glass and the Birth of Meta-Analysis

- **1976:** Glass' *Primary, Secondary, and Meta-Analysis of Research* is published
 - First large-scale application: synthesis of studies examining the effects of psychotherapy (Smith & Glass, 1977)
 - Result: psychotherapies had a pooled effect of **SMD=0.68**, which can be considered quite large!
 - Many meta-analyses have seen corroborated that psychotherapy is effective
- Quantitative Evidence that Eysenck was wrong
- But Eysenck was not convinced...

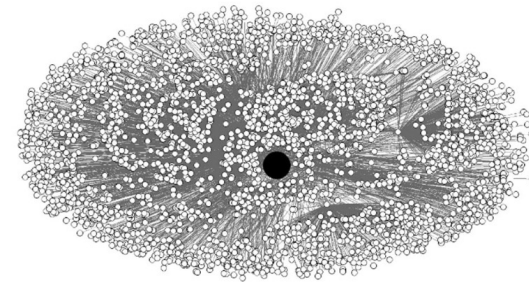


Figure 2. The meta-analytic big bang starting with only articles that cite Glass (1976) (the large black node in the center) and moving out through two levels of the citation network.

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An Exercise in Mega-Silliness

The article by Smith and Glass (September 1977) begins promisingly by referring to my “tendentious diatribes” (p. 752) on the outcome problem in psychotherapy, inviting the reader to study two papers of mine, one of which I have no recollection of writing, and which the reader will look in vain for in the journal appearing in the list of references—indeed, the year and volume number given in the reference do not agree! The authors go on to the “astute dismantling of the Eysenck myth” (p. 752) by Bergin, not mentioning that the Bergin myth has in

Eysenck, 1978

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At the same time...

- Hunter & Schmidt develop their own particular type meta-analysis, which focuses on artifact correction (1977)
- Still widely used, e.g. in organizational psychology
- In medicine, meta-analysis is used to show that aspirin has a small, but significant preventive effect on myocardial infarction

<i>Trial</i>	<i>Number of patients</i>	<i>Reduction (%) in all-cause mortality with aspirin</i>
MRC I (1974)	1239	26 NS
CDP (1976)	1529	30 NS
MRC II (1976)	1725	30 NS
German (1978)	626	18 NS
AMIS (1980)	4524	10 NS
PARIS (1980)	1216	18 NS

All six trials: 10 859 patients
Weighted overall effect of aspirin: 23% reduction, $P < 0.0001$

Elwood, 2006