Software science revisited: A critical analysis of the theory and its empirical support

ABSTRACT
The theory of software science was developed by the late M. H. Halstead of Purdue University during the early 1970's. It was first presented in unified form in the monograph Elements of Software Science published by Elsevier North-Holland in 1977. Since it claimed to apply scientific methods to the very complex and important problem of software production, and since experimental evidence supplied by Halstead and others seemed to support the theory, it drew widespread attention from the computer science community.

INDEX TERMS
software science, Software complexity, software engineering, software management, software measurement, software metrics

CITATION
doi:10.1109/TSE.1983.236460
Associated Press thus faced a direct threat to its primary market by a competitor who had incurred none of the development costs associated with collecting the news...

The limited extent to which the INS rationale has been incorporated into the common law of the states indicates that the decision is properly viewed as a response to unusual circumstances rather than as a statement of generally applicable principles of common law. 35 We refer generally to “European Copyright Systems” although there are some significant differences between the copyright traditions of different Continental countries, such as the difference between the Dualist Theory of Copyright, applied most prominently in France, and The Monist Theory, applied in Germany. Decision support systems (DSS) is the area of the information systems (IS) discipline that is focused on supporting and improving managerial decision making. In 2005 the Journal of Information Technology (JIT) published our paper that critically analyzed DSS research from 1990 to 2003 (Arnott and Pervan, 2005). That paper used bibliometric content analysis as its method and analyzed 1020 articles in 14 journals. The analysis illuminated a vibrant and important part of IS research. Personal DSS and group support systems (GSS) dominated DSS research and two-thirds of DSS research was empirical, Shen, V. Y.; Conte, S. D.; and Dunsmore, Herbert E., “Software Science Revisited: A Critical Analysis of the Theory and Its Empirical Support” (1981). Department of Computer Science Technical Reports. Paper 303. https://docs.lib.purdue.edu/cstech/303. This document has been made available through Purdue e-Pubs, a service of the Purdue University Libraries. Please contact epubs@purdue.edu for additional information. fi. • } Software Science Revisited: A Critical Analysis of the Theory and its Empirical. Support.