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COG 356

John Alan Robinson

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Born in March 1930, John Alan Robinson was destined to become one of the great thinkers in philosophy, math, and computer science of his time. His work, especially his unification algorithm, set the basis for logical programming paradigm and soon the Prolog computing language. John Alan Robinson moved to the United States in 1952 with a classics degree from Cambridge University, then furthering his education with a PhD in philosophy from Princeton in 1956. By 1967, John Alan Robinson moved to Syracuse University as a Distinguished Professor of Logic and Computer Science in 1967, whilst becoming professor emeritus in 1993. His work on logical programming spawned the ideas of binding contents of variables, being a kind of one-time assignment by the equality symbol "=" . Robinsons idea of Unification in Computer Science formed around the ideas of algorithmic processes of solving equations between symbolic expressions. From this, proofs became more of a common staple within programming as Robinsons syntactical unification algorithm allowed one to instantiate a formula during a proof. Furthermore, Robinsons work in his unification algorithm helped eliminate a glaring issue in mathematics called combinatorial explosion, the process of a math equation becoming so complex due to the problem being affected by input, constraints, and bounds. Combinatorial explosion was a legitimate justification for intractability of certain mathematical problems. Robinsons further work into automated reasoning, a sub-field of artificial intelligence, theoretical computer science, and by extent philosophy, was aided by his discoveries into formal logic.